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# End Notes

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## Endnotes: A New Nuclear Threat: The Tenth Circuit's Shocking Misinterpretation of Preemption Demanding an Amendment to the Price-Anderson Act

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[42] 42 U.S.C. § 2210-14; *see* Duke Power Co. v. Carolina Envtl. Study Grp., 438 U.S. 59 (1978).

[43] *See Duke Power Co.*, 438 U.S. at 65, 67; Diane Cardwell, *The Murky Future of Nuclear Power in the United States*, N.Y. Times (Feb. 18, 2017), https://www.nytimes.com/2017/02/18/business/energy-environment/nuclear-power-westinghouse-toshiba.html.

[44] Am. Nuclear Soc'y, The Price-Anderson Act, (Nov. 2005), http://www.ans.org/pi/ps/docs/ps54-bi.pdf.

[45] Taylor Meehan, Note, *Lessons From the Price-Anderson Nuclear Industry Indemnity Act for Future Clean Energy Compensatory Models*, 18.1 Conn. Ins. L. J. 339, 353 (2011); *see* U.S. Dep't of Energy Report, *supra* note 11 (breaking down liability coverage in greater detail); *see also Appropriations Watch: FY 2018,* Comm. for a Responsible Fed. Budget (Mar. 23, 2018), http://www.crfb.org/blogs/appropriations-watch-fy-2018 (placing federal energy funds in the top half of largest pools); Matthew Wald, *Tax on Oil May Help Pay for Cleanup*, N.Y. Times (May 1, 2010), http://www.nytimes.com/2010/05/02/us/02liability.html (explaining that United States law requires payment of eight cents per barrel of oil to the Oil Spill Liability Trust Fund for all oil imported or produced; and in exchange for the payment, operators of offshore oil platforms, among others, are limited in liability to $75 million for damages, which can be paid by the fund, but are not indemnified from the cost of cleanup).

[46] 42 U.S.C. § 2210 (2012); *see generally* Wald, *supra* note 44.

[47] *See* 42 U.S.C. § 2210.

[48] U.S. Nuclear Reg. Comm'n, Backgrounder on Three Mile Island Accident (Feb. 2013), https://www.nrc.gov/reading-rm/doc-collections/fact-sheets/3mile-isle.pdf (describing how the most serious accident in United States commercial nuclear power plant operating history had little radioactive release and no detectable health effects on plant workers or the public).

[49] *Nuclear Liability Insurance (Price-Anderson Act),* Nat'l Ass'n of Ins. Comm'rsm (Nov. 15, 2017), http://www.naic.org/cipr_topics/topic_nuclear_liability_insurance.htm (outlining how the Three Mile Island ("TMI") accident in 1979 demonstrated the ability of the PAA to effectively compensate the public).

[50] Reitze, Jr. & Rowe, *supra* note 34 at 10,19090.

[51] 42 U.S.C. § 2210 (2012) (highlighting the insurance regime that provides the industry a safety net but lacking in actual safety net language protecting exposed victims and communities).

[52] Nuclear Indemnities 21st ed., 900 (1965), CQ Almanac cqal65-1258131, http://library.cqpress.com.proxy.wcl.american.edu/cqalmanac/document.php?id=cqal65-1258131&type=hitlist&num=2.

[53] H.R. Rep. No. 100–04, pt. 3, at 13–16 1987). *Contra* Roberts v. Fla. Power & Light Co., 146 F.3d 1305, 1306 (11th Cir. 1998) (explaining that Congress passed the extension of Price-Anderson Amendments Act in 1988 to create an exclusive federal cause of action for radiation injury).

[54] *See In re* TMI Litigation Cases Consolidated II, 940 F.2d 832, 852 (3d Cir. 1991).

[55] S. Rep. No. 85–296, at 9 (1957) (emphasis added) ("[T]here is no interference with the state law until there is a likelihood that the damages exceed the amount of financial responsibility required together with the amount of the indemnity.").

[56] H.R. Rep. No. 100–04, pt. 2, at 4 (1987).

[57] 42 U.S.C. § 2210(a) (2012).

[58] *Id.* § 2014(q).

[59] An ENO is "any event causing a discharge or dispersal of source . . . material from its intended place of confinement . . . [and] the Nuclear Regulatory Commission or the Secretary of Energy determines [the event] has resulted or will probably result in substantial damages to persons offsite or property offsite." *Id.* § 2014(j).

[60] 464 U.S. 238 (1984).

[61] *Id.* at 251 (noting that the plaintiff's claims did not meet the criteria defining an ENO that were established by the Nuclear Regulatory Commission, as plutonium processing plants were not required to register for indemnification under Price-Anderson until 1977).

[62] *Id.* at 240.

[63] *Id.* at 248, 250–52.

[64] § 2210(o).

[65] *Id.*

[66] *Id.* § 2210(n)(2).

[67] *See generally* Duke Power Co. v. Carolina Envtl. Study Grp., 438 U.S. 59, 88 (1978) (affirming a strong and continuing national policy in favor of widespread nuclear power development).

[68] *See, e.g., Silkwood v. Kerr-McGee Corp.*, 464 U.S. 238, 252 (holding that the Atomic Energy Act did not preempt a ten million dollar punitive award in favor of the plaintiff); *But see Northern States Power Co. v. Minnesota*, 405 U.S. 1035, 1037–39 (1972) (arguing that state regulations setting strict limits on the release of radioactive waste from nuclear power plants were preempted by the Atomic Energy Act).

[69] § 2210(m) (permitting insurers of nuclear facilities to give immediate financial assistance to injured parties after an incident). *See* Jose, *infra* notes 93, 119, 179, 233 and accompanying text.

[70] § 2210(n)(1), 42 U.S.C.§ 2014(j).; *see In re* TMI Litigation Cases Consolidated II, 940 F.2d 832, 852 (3d Cir. 1991) (interpreting the Act to define an "extraordinary nuclear occurrence" as "any event causing a discharge or dispersal of source, special nuclear, or byproduct material from its intended place of confinement in amounts offsite, or causing radiation levels offsite, which the Nuclear Regulatory Commission or the Secretary of Energy, as appropriate, determines to be substantial, and . . . determines has resulted or will probably result in substantial damages to persons offsite or property offsite").

[71] S. Rep. No. 899-1605, at 3209 (1966).

[72] *Id.*

[73] *Id.* at 3212.

[74] § 2210(n)(2).

[75] El Paso Nat. Gas Co. v. Neztsosie, 526 U.S. 473, 477 (1999) (citing S. Rep. No., 100-218, at 488 (1988)).

[76] § 2014(w).

[77] International Atomic Energy Agency, Convention on Supplementary Compensation for Nuclear Damage, July 22, 1998, I.A.E.A. INFCIRC/567. The CSC was implemented at a *Conference* at International Atomic Energy Agency (IAEA) Headquarters in Vienna. The CSC strives to increase compensation assigned for nuclear accidents by contracting funding partners on the basis of their nuclear capacity. This international liability scheme strengthens relations between signatories to other various nuclear energy safety conventions facilitated by the United Nations.

[78] *Id.*; 42 U.S.C. § 17373 (outlining the purpose and cost allocations for the Convention on Supplementary Compensation for Nuclear Damage).

[79] *Id.*

[80] *Liability for Nuclear Damage*, World Nuclear Ass'n (June 2017), http://www.world-nuclear.org/information-library/safety-and-security/safety-of-plants/liability-for-nuclear-damage.aspx.

[81] International Atomic Energy Agency, Convention on Supplementary Compensation for Nuclear Damage, July 22, 1998, I.A.E.A. INFCIRC/567.

[82] *Compare* Definition of Nuclear Damage in CSC *to* 42 U.S.C. §2014(q) (2012).

[83] *See generally* Colorado-Ute Electric Ass'n v. Pub. Utilities Comm'n of Colo., 760 P.2d 627 (Colo. 1988); W. Colo. Cong. v. Umetco Minerals Corp., 919 P.2d 887, 890 (Colo. App. 1996) (challenging issuance of an amended radioactive materials license); *see also* Reitze, Jr. & Rowe, *supra* note 35 at 10,186.

[84] Cook v. Rockwell Int'l Corp., 273 F. Supp. 2d 1175, 1178 (D. Colo. 2003).

[85] Cook v. Rockwell Int'l Corp., 618 F.3d 1127, 1133 (10th Cir. 2010).

[86] *See* Patricia Buffer, *Rocky Flats History,* Dep't of Energy (July 2003), https://www.lm.doe.gov/WorkArea/linkit.aspx?LinkIdentifier=id&ItemID=3026 ("[T]he sudden shutdown in 1989 by the FBI/EPA raid had left large quantities of plutonium and other hazardous substances in various stages of processing and storage. In addition, some past practices of waste disposal and material storage posed potential environmental and health risks").

[87] Cook v. Rockwell Int'l Corp., 580 F. Supp. 2d 1071, 1079, 1112 (D. Colo. 2006).

[88] *Id.* at 1145–47.

[89] *Id.* at 1080; *see* Petition for Writ of Certiorari at 5, Dow. v. Cook, 790 F.3d 1088, 1100 (10th Cir. 2015), (No. 15-791).

[90] *Cook*, 580 F. Supp. 2d at 1078 (noting that although the site was owned by the Department of Energy, independent contractors, Dow Chemical and Rockwell International, actually operated it).

[91] Cook v. Rockwell Int'l Corp., 618 F.3d 1127, 1132-33 (10th Cir. 2010).

[92] Cook v. Rockwell Int'l Corp., 790 F.3d 1088, 1090 (10th Cir. 2015).
[93] *Id.*
[94] *See id.*; Donald Jose, Comment, *The Complete Federal Preemption of Nuclear Safety Should Prevent Scientifically Irrational Jury Verdicts in Radiation Litigation*, 26 Temp. J. Sci. Tech. & Envtl. L. 1 (2007).
[95] *See Cook*, 790 F.3d at 1090 (holding that the trial court had erred in its instructions to the jury regarding the plaintiffs' burden of proof under the PAA with respect to a "nuclear incident" and the Tenth Circuit vacated the district court's judgment and remanded the case for further proceedings).
[96] *See* 42 U.S.C. § 2014(q) (2012) (outlining that plaintiff who cannot demonstrate bodily injury or property damage as defined by the PAA cannot meet the prerequisites for a public liability action, and 11 thus cannot maintain any action for a radiation-related claim).
[97] *Cook*, 790 F.3d at 1096.
[98] *Id.*
[99] *Id.* at 1090-91.
[100] *Id.* at 1099 (arguing that because the defendants did not use preemption as an affirmative defense, the defense could not be raised on appeal).
[101] *See* § 2014(w) (showing that the PAA is concerned with "public liability"—i.e., harm to the offsite public from a release of radiation in excess of federal limits. Federal or state workers' compensation laws cover injuries to onsite employees of licensees, and damage to onsite property is covered by other insurance).
[102] U.S. Const. art. VI, § 2.
[103] Gibbons v. Ogden, 22 U.S. 1, 210, 212 (1824).
[104] *See* U.S. Const. art. VI, § 2.
[105] *See* William M. Bratton, Note, *The Preemption Doctrine: Shifting Perspectives on Federalism and the Burger Court,* 75 Colum. L. Rev. 623, 623-24 (1975) (analyzing the complications of implied preemption interpretations).
[106] *See* King, *supra* note 25, at 991 (analyzing how preemption can raise significant philosophical questions related to federalism and the balance between state and federal power. Additionally, preemption can be express or implied).
[107] *Preemption Under the Atomic Energy Act: Federal Courts Void California and New York City Nuclear Power Laws*, Envtl. L. Reporter, https://elr.info/sites/default/files/articles/9.10045.htm (last visited Mar. 19, 2018) (citing Lawrence H. Tribe, Am. Const. L. § 6-23, 377 (3d ed. 2000)).
[108] *See* Pennsylvania v. Nelson, 350 U.S. 497, 499 (1956).
[109] *See* Gibbons v. Ogden, 22 U.S. 1, 210, 212 (1824).
[110] *See* Bratton, *supra* note 104, at 627 (referring to this process as implied preemption: when the Court "ascertain[s] the purposes 'necessarily implied' in a federal statutory scheme, and strike[s] down any state law that inhibit[s] their accomplishment") (known as implied preemption). Known as implied preemption.
[111] *See Nelson*, 350 U.S. at 498–99, 504 (striking down the state law because the enforcement of the state law diluted the effectiveness of the federal regulation).
[112] *See, e.g.*, Fla. Lime & Avocado Growers, Inc. v. Paul, 373 U.S. 132, 147–50 (1963) (holding that the factor which strongly suggests that Congress did not mandate uniformity for each marketing order arises from the legislative history); Campbell v. Hussey, 368 U.S. 297, 301–02 (1961) (arguing that legislative history was replete with references to a need for "uniform'" or "official" standards, which could harmonize the grading and inspection of tobacco at all markets throughout the country).
[113] *See, e.g.*, San Diego Building Trades Council v. Garmon, 359 U.S. 236, 241–44 (1959) (listing economic instruments like the strike and the picket line, and claims between employers and labor unions as an area requiring uniformity and noting that Congress considered centralized administration of the instruments necessary to obtain uniform application of its substantive rules and to avoid conflicts likely to result from local procedures and attitudes towards labor controversies); *see also* Pennsylvania v. Nelson, 350 U.S. 497, 502–04 (1956).
[114] *See* Bratton, *supra* note 104, at 623 (analyzing the Supreme Court's evolving application of federal preemption).
[115] 312 U.S. 52 (1941).
[116] 331 U.S. 218 (1947).
[117] *See* Bratton, *supra* note 104, at 623–25.
[118] Hines v. Davidowitz, 312 U.S. 52, 67 (1941).
[119] Rice v. Santa Fe Elevator Corp., 331 U.S. 218, 230 (1947).
[120] *See generally* Jose, *supra* note 93; Jason Steed, Supreme Court Trends in Federal Preemption (2013), originally published on Law360, Nov. 4, 2013 (since 2007, the U.S. Supreme Court held claims were preempted in eight out of thirteen cases-and would have decided in favor of a ninth, but with Chief Justice Roberts abstaining, the court was split 4-4).
[121] *See* Cook v. Rockwell Int'l Corp., 790 F.3d 1088, 1098 (10th Cir. 2015) (holding that because the defendants forfeited a defense of preemption that it did not apply). *But see* Silkwood v. Kerr-McGee Corp., 464 U.S. 238, 249 (1984) (finding the punitive damages award against a nuclear power plant for negligent contamination not impliedly preempted by federal law).
[122] *See Preemption Under the Atomic Energy Act: Federal Courts Void California and New York City Nuclear Power Laws,* 9 ELR 10,045, 10,045 (1979).
[123] *See* id.
[124] *Id.* (recognizing a jurisdictional concern when raising a claim of injury from a power plant).
[125] 447 F.2d 1143, 1154 (8th Cir. 1971), *aff'd mem.* 405 U.S. 1035 (1972).
[126] *Id.* (holding the state regulation could have been invalidated under § 274(k) alone as an implicitly impermissible attempt to protect against radiation hazards. The court concluded that the measure infringed upon § 274(k). Reading the provision as reserving exclusive authority to regulate construction and operation of nuclear plants for the federal government, the court held the federal sphere encompasses the setting of radiation standards for such plants. Thus, finding the state measure was implicitly preempted under both §§ 274(c) and 274(k)).
[127] 659 F.2d 903 (9th Cir. 1981).
[128] *Id.* at 907; *see also* Cal. Pub. Res. §§ 25000-25968 (West 1977) (showing the law does more than implement safety by covering the prohibition of siting new nuclear plants until the technology for reprocessing is certified by the federal government and requiring the state to perform a study on the consequences of underground construction).
[129] 659 F.2d 903 at 926 (concluding that the state's nuclear certification requirements were preempted by the Atomic Energy Act because state laws aimed primarily at reducing radiation hazards associated with reactor operation, and were thus, preempted by § 274(k)).
[130] *See* Comment, *Preemption Under the Atomic Energy Act: Federal Courts Void California and New York City Nuclear Power Laws,* 9 ELR 10045, (1979).
[131] 42 U.S.C. § 2021 (1982).
[132] *Id.* (showing the amendment specifically allowed the AEC to transfer to the states its regulatory authority over byproduct, source and special nuclear materials in amounts not sufficient to form a critical mass); *see also*; 42 U.S.C. § 2014(e)(2)(aa) (1982) (defining these three types of radioactive hazards).
[133] § 2021(b)1984.
[134] *Id.* § 2021(k).
[135] Hearings on H.R. 1414 Before the Joint Comm. on Atomic Energy on Federal-State Relationships in the Atomic Energy Field, 86th Cong. 307–08 (1959) (testimony of Robert Lowenstein, Office of the General Counsel, AEC).
[136] *See* Rainer v. Union Carbide Corp., 402 F.3d 608, 616–17 (6th Cir. 2005) (noting that by amending the Price-Anderson Act in 1988, Congress created a cause of action arising from nuclear incidents called "public liability actions" ("PLAs")); Roberts v. Fla. Power & Light Co., 146 F.3d 1305, 1306 (11th Cir. 1998) ("Congress passed the Price-Anderson Amendments Act of 1988 . . . creating an exclusive federal cause of action for radiation injury"), *cert. denied*, 525 U. S. 1139 (1999); O'Conner v. Commonwealth Edison Co., 13 F.3d 1090, 1113 (7th Cir. 1994) (stating that any "tension" between federal standards and state liability standards must be resolved to avoid inconsistency with the Price Anderson Act); *In re* TMI Litig. Cases Consol. II, 940 F.2d 832, 857 (3d Cir. 1991) (discussing the effect of the Price-Anderson Act on the law landscape, especially the consistency in law with regard to a single nuclear incident).
[137] *See* King, *supra* note 25, at 995.
[138] *See* Nat. Res. Def. Council, Inc. v. U.S. Nuclear Reg. Comm'n, 685 F.2d 459, 481-84 (D.C. Cir. 1982) (highlighting the advantages of nuclear power through a cost-benefit analysis); Mike Conley & Tim Maloney, *Nuclear Energy vs. Wind and Solar*, The Energy Reality Project (Apr. 15, 2015), https://framasphere.org/posts/689421 (acknowledging that disadvantages to nuclear power exist, but reliability is not one of these disadvantages).
[139] *See* Pac. Legal Found. v. State Energy Res. Conservation & Dev. Comm'n., 659 F.2d 903, 907 (9th Cir. 1981).
[140] *See In re* TMI Litigation, 557 F. Supp. at 108, 117.
[141] *See, e.g.*, William J. Broad, *Experts Call Reactor Design "Immune" to Disaster*, N.Y. Times (Nov. 15, 1988), http://www.nytimes.com/1988/11/15/science/experts-call-reactor-design-immune-to-disaster.html?pagewanted=all (detailing small modifications to the new reactor and how the physical characteristics make the machine immune to meltdown, which is the most

feared reactor accident. Designs rely on laws of nature rather than complicated machinery and error-prone caretakers to prevent major accidents).

[142] *See In re* TMI Litigation Cases Consol. II, 940 F.2d 832, 852 (3d Cir. 1991) (explaining how the PAA provisions effectively provide care for the public following the Three Mile Island disaster).

[143] *See* Bohrmann v. Me. Yankee Atomic Power Co., 926 F. Supp. 211, 216 (D. Me. 1996) (holding that prior to the PAA, persons claiming injury from radiation emitted from source, special nuclear or byproduct material could file state law causes of action in state or federal courts and recover under any theory of liability available in any of the fifty states).

[144] *See generally The Price-Anderson Act – The Third Decade: A Report to Congress*, NUCLEAR REG. COMM'N (Oct. 1983), https://www.nrc.gov/docs/ML0727/ML072760026.pdf.

[145] *See* Petition for Writ of Certiorari at 5, Dow v. Cook, 790 F.3d 1088 (10th Cir. 2015), (No. 15-791).

[146] *See id.*

[147] *See* Cook v. Rockwell Int'l Corp., 273 F. Supp. 2d 1175, 1180 (D. Colo. 2003) (holding that Congress did not intend for federal regulatory standards to preempt state law standards of care in PAA actions).

[148] *See* U.S. NUCLEAR REG. COMM'N, *supra* note 47; T.L. Fahring, Note, *Nuclear Uncertainty: A Look at the Uncertainties of a U.S. Nuclear Renaissance*, 41 TEX. ENVTL. L.J. 279, 284–86 (2011).

[149] *See Cook v. Rockwell Int'l Corp.,* 790 F.3d 1088, 1098–99 (10th Cir. 2015). *Contra* Cotroneo v. Shaw Env't & Infrastructure, Inc., 639 F.3d 186, 197 (5th Cir. 2011) (indicating "[r]ecovery on a state law cause of action without a showing that a nuclear incident has occurred would circumvent the entire scheme governing public liability actions.").

[150] *Id.* (quoting "Had Congress intended to limit recovery to these categories of personal injury claims, it easily could have and probably would have plainly and expressly said so.").

[151] *See, e.g.,* Nieman v. NLO, Inc., 108 F.3d 1546, 1553 (6th Cir. 1997) (arguing that an injured party seeking compensation for a PAA injury can file a claim under the statute or not at all); *see also Cotroneo*, 639 F.3d 186, 193-200 (5th Cir. 2011); Dumontier v. Schlumberger Tech. Corp., 543 F.3d 567, 569-571 (9th Cir. 2008); *In re* Hanford Nuclear Reservation Litig., 534 F.3d 986, 1009-10 (9th Cir. 2008); Golden v. CH2M Hill Hanford Grp., Inc., 528 F.3d 681, 682-684 (9th Cir. 2008); TMI II, 940 F.2d at 855; O'Conner v. Commonwealth Edison Co., 13 F.3d 1090, 1099 (7th Cir. 1994); Roberts v. Florida Power & Light Co., 146 F.3d 1305, 1306 (11th Cir. 1998).

[152] *See Cotroneo*, 639 F.3d at 186, 191-97 (relying on statutory textualism and holding that a plaintiff who asserts any claim arising out of a "nuclear incident" as defined in the PAA, 42 U.S.C. § 2014(q), can sue under the PAA or not at all," and to allow parties to recover under state law for lesser occurrences would "circumvent the entire scheme governing public liability actions."); *see also* Roberts v. Fla. Power & Light Co., 146 F.3d 1305, 1306 (11th Cir. 1998) ("Congress passed the Price-Anderson Amendments Act of 1988 . . . creating an exclusive federal cause of action for radiation injury."); O'Conner v. Commonwealth Edison Co., 13 F.3d 1090, 1100, 1105 (7th Cir. 1994) ("[A] new federal cause of action supplants the prior state cause of action . . . . [S]tate regulation of nuclear safety, through either legislation or negligence actions, is preempted by federal law.").

[153] *See generally In re* Hanford Nuclear Reservation Litigation, 534 F.3d 986 (9th Cir. 2008).

[154] *See Cook* 790 F.3d, at 1098; *see also In re* Hanford Nuclear Reservation Litigation, at 1009 (including the rationale that "[t]he issue before us isn't what happens in the event of a nuclear incident, but (again) what happens in the face of a lesser occurrence").

[155] T.L. Fahring, Note, *Nuclear Uncertainty: A Look at the Uncertainties of a U.S. Nuclear Renaissance*, 41 TEX. ENVTL. L.J. 279, 280–83 (2011).

[156] Duke Power Co. v. Carolina Envtl. Study Grp., 438 U.S. 59, 83 (1978).

[157] William D. O'Connell, Note, *Causation's Nuclear Future: Applying Proportional Liability to the Price-Anderson Act*, 64 DUKE L.J. 333, 335–38 (2014).

[158] 42 U.S.C. § 2210(s) (2012); *see also* § 2210(n)(2) (creating federal jurisdiction and allowing removal to federal court for cases "resulting from a nuclear incident"); § 2014(q) (defining "nuclear incident" as an injury "resulting from the radioactive, toxic, explosive, or other hazardous properties of source, special, nuclear, or byproduct material").

[159] *See* Golden v. CH2M Hill Hanford Grp., 528 F.3d 681, 683–84 (9th Cir. 2008) (ruling that the operator was not liable under PAA for emotional injuries and highlighting a difference between the PAA and state law coverage aims).

[160] Metro. Life Ins. Co. v. Taylor, 481 U.S. 58, 64–65 (1987) (finding the employee's common-law contract and tort claims were preempted by ERISA and fell within provision establishing exclusive federal cause of action).

[161] Cook v. Rockwell Int'l Corp., 790 F.3d 1088, 1099 (10th Cir. 2015).

[162] *Id.*; H.R. Rep. No. 1414, at 2 (1988).

[163] § 2014(j); § 2210(n)(2) (1992). *But see* Silkwood v. Kerr-McGee Corp., 464 U.S. 238, 251 (1984) (explaining that "Congress' decision to prohibit the states from regulating the safety aspects of nuclear development" did nothing to undermine the "ample evidence that Congress had no intention of forbidding the states from [providing traditional tort] remedies").

[164] *Cook*, 790 F.3d at 1095 (walking the Court through the different types of preemption, discussing how they are not met by the facts of this case as a means to highlight Congressional intent).

[165] El Paso Nat. Gas Co. v. Neztsosie, 526 U.S. 473, 484 n.6 (1999) (quoting Caterpillar, Inc. v. Williams, 482 U.S. 386, 393 (1987)) (noting that the Complete Preemption doctrine, under which "the preemptive force of a statute is so extraordinary that normal state law claims are converted into federal claims to ensure the efficient and equitable resolution of claims).

[166] *Cook*, 790 F.3d at 1095.

[167] *Id.* (clarifying that an LNO is not an ENO).

[168] *Id.* at 1090.

[169] *Id.* (identifying alleged but unproven "nuclear incidents" as "lesser nuclear occurrences").

[170] *Id.* at 1095–96.

[171] *Id.* (showing how the Tenth Circuit looked to intent and legislative history to discern meanings).

[172] *See supra* notes 119–20 and accompanying text.

[173] *See* King, *supra* note 25, at 989, 995 and accompanying text.

[174] *Cook*, 790 F.3d at 1096.

[175] *See id.* at 1093–94 (regarding the procedural mistake, the court clarified that arguments that were not asserted on appeal may not be asserted on remand) (citing Dow Chemical Corp. v. Weevil-Cide Co., 897 F.2d 481, 486 n.4 (10th Cir. 1990)).

[176] 42 U.S.C. § 2014(q) (2012) (defining a "nuclear incident" as "any occurrence, including an extraordinary nuclear occurrence, within the United States causing . . . bodily injury, sickness, disease or death, or loss of or damage to property, or loss of use of property, arising out of or resulting from the radioactive, toxic, explosive or other hazardous properties of source, special nuclear, or byproduct material . . . .").

[177] *See* Cook v. Rockwell Int'l Corp., 618 F.3d 1127, 1133–34 (10th Cir. 2010) (detailing the fifteen-year litigation process that preceded a month long jury trial).).

[178] See *id.* at 1133 (discussing the $926 million-dollar award by a jury verdict for the plaintiff, which included compensatory and punitive damages, and prejudgment interest).

[179] § 2014(q).

[180] *See* Jose, *supra* note 93, at 20 (referencing the intervention by the United States Supreme Court should courts split on the issue of federal statutory interpretation).

[181] *See* El Paso Nat. Gas Co. v. Neztsosie, 526 U.S. 473, 485 n.6 (1999) (citing Caterpillar Inc. v. Williams, 482 U.S. 386, 393 (1987)).

[182] 29 U.S.C. § 1001; 29 U.S.C. §§ 151-169; *see generally Neztsosie*, 526 U.S. at 485.

[183] *See id.* at 477 (observing that the creation of an exclusive federal cause of action can provide benefits, such as avoiding a proliferation of suits and conserving limited compensatory funds).

[184] *Id.*

[185] Cook v. Rockwell Int'l Corp., 790 F.3d 1088, 1094 (10th Cir. 2015).

[186] Daniel Kolomitz, Note, *A Nuclear Threat: Why the Price-Anderson Act Must Be Amended Following* Cook v. Rockwell, 48 ARIZ. ST. L.J. 853, 858 (2016).

[187] Nieman v. NLO, Inc., 108 F.3d 1546, 1553 (6th Cir. 1997); O'Conner v. Commonwealth Edison Co., 13 F.3d 1090, 1104-05 (7th Cir. 1994).

[188] 42 U.S.C. § 2014(hh) (2012); *see also In re* TMI Cases Consolidated II, 940 F.2d 832, 850–58 (3d Cir. 1991) *cert. denied*, 503 U.S. 906, 112, S. Ct. 1262, 117 L.Ed.2d 491 (1992) (holding that federal law trumps state law and that the Act was constitutional); *O'Conner*, 13 F.3d at 1105 (finding that federal law pre-empts state law, whether created by legislation or common law); *Nieman*, 108 F.3d at 1553 (finding that Price-Anderson act specifically dictates that that state law only applies to the extent that it coincides with federal law); Roberts v. Fla. Power & Light, 1997 WL 382035, at *4 (S.D. Fla. June 9, 1997)

(finding that federal law provides the sole measure of a defendant's liability), *aff'd*, 146 F. 3d 1305 (11th Cir. 1998), *cert. denied*, 525 U. S. 1139, 1140 (1999); McLandrich v. S. Cal. Edison Co., 942 F. Supp. 457, 467 (S.D. Cal. 1996) (stating that the state law only applies if it is not inconsistent with federal law); Smith v. Gen. Elec. Co., 938 F. Supp. 70, 76 (D. Mass. 1996) (holding that the 1988 Amendments preserve state law as long as it is not "inconsistent with federal law"); Coley v. Commonwealth Edison Co., 768 F. Supp. 625, 629 (N.D. Ill. 1991) (holding that state law is invalid if it contradicts federal law); Hennessy v. Commonwealth Edison Co., 764 F. Supp. 495, 503 (N.D. Ill. 1991) (finding that the standard of care is predicated on federal law); *see generally Neztsosie*, 526 U.S. at 477; TNS, Inc. v. NLRB, 296 F.3d 384, 398 (6th Cir. 2002) ("[T]he Sixth Circuit has joined with almost every other circuit in holding that the Nuclear Regulatory Commission safety regulations conclusively establish the duty of care owed by defendants in radiation safety personal injury cases governed by the 1998 amendments to the Price-Anderson Act.").

189 464 U.S. 238, 249 (1984).

190 Cook v. Rockwell Int'l Corp., 580 F. Supp. 2d 1071, 1150 (D. Colo. 2006).

191 *Silkwood*, 464 U.S. at 256 (contending that the award is pre-empted because it frustrates Congress' express desire "to encourage widespread participation in the development and utilization of atomic energy for peaceful purposes").

192 *See* King, *supra* note 25, at 996 and accompany text.

193 *Compare Silkwood*, 464 U.S. at 256 (saying that the state law governing punitive damages for nuclear liability was not preempted by the federal law) *with* Price-Anderson Amendments Act of 1998, 42 U.S.C. §§ 2014, 2210 (1988) (establishing liability for punitive injury and thus prospectively preempting *Silkwood*).

194 *In re* TMI Cases Consolidated II, 940 F.2d 832, 850–58 (3d Cir. 1991) *cert. denied*, 503 U.S. 906, 112, S. Ct. 1262, 117 L.Ed.2d 491 (1992) ("[I]t is clear that federal law governs the standard of care for tort claims arising from nuclear accidents"), *cert. denied*, 516 U.S. 1154 (1996). For a detailed discussion of the background and legislative history of Price-Anderson, *see generally* Duke Power Co. v. Carolina Envtl. Study Grp., 438 U.S. 59, 64–69 (1978); O'Conner v. Commonwealth Edison Co., 13 F.3d 1090, 1095, 1105 (7th Cir. 1994) (stating that any "tension" between federal standards and state liability standards must be resolved to avoid inconsistency with the Price Anderson Act).

195 *Silkwood*, 464 U.S. at 239.

196 *Id.*

197 *Id.* at 258 (acknowledging that there is "tension between the conclusion that safety regulation is the exclusive concern of the federal law and the conclusion that a state may nevertheless award damages based on its own law of liability," but finding that "Congress intended to stand by both concepts and to tolerate whatever tension there was between them"); King, *supra* note 25, at 995.

198 Cook v. Rockwell Int'l Corp., 790 F.3d 1088, 1092 (10th Cir. 2015).

199 *Id.*; *see, e.g.,* Mauldin v. Worldcom, Inc., 263 F.3d 1205, 1211 (10th Cir. 2001).

200 *See* Cook v. Rockwell Int'l Corp., 618 F.3d 1127 (10th Cir. 2010) (holding that the jury was properly instructed on the elements of a nuisance claim and no one had ever challenged the sufficiency of the evidence in the record). *Contra* Dow Chem. Corp. v. Weevil-Cide Co., 897 F.2d 481, 486 n.4 (10th Cir. 1990).

201 *Cook*, 618 F.3d at 1143.

202 *Id.* at 1136.

203 *Cook*, 790 F.3d at 1091-95 (acknowledging the defendants mentioning of *Cotroneo v. Shaw Environment & Infrastructure, Inc.* as the only helpful argument in which the court reasoned more generally that to allow parties to recover under state law for lesser occurrences would "circumvent the entire scheme governing public liability actions," refuting this rationale as implied preemption rather than complete express preemption).

204 123 S. Ct. 2374, 2376 (2003).

205 *Id.* at 2388.

206 *See In re* TMI, 67 F.3d 1119, 1125 (3rd Cir. 1995) ("Congress clearly intended to preempt state regulation of nuclear safety standards when it enacted Price-Anderson . . ."). *But cf. American Ins. Ass'n*, 123 S. Ct. at 2393, 2401 (Ginsberg, J., dissenting) (arguing Courts step out of their proper role when they rely on no legislative or even executive text, but only on inference and implication, to preempt state laws on foreign affairs grounds).

207 42 U.S.C. § 2014(q) (2012).

208 *Id.*

209 *Id.*

210 Cook v. Rockwell Int'l Corp., 790 F.3d 1088, 1090-95 (10th Cir. 2015) (failing to meet the PAA standards eliminated the PAA as an option, and therefore, eliminated preemption considerations).

211 *See id.*; Meehan, *supra* note 44.

212 § 2014(hh); *see also* El Paso Nat. Gas Co. v. Neztsosie, 526 U.S. 473, 484 (1999) ("Congress thus expressed an unmistakable preference for a federal forum . . . ."); Duke Power Co. v. Carolina Envtl. Study Grp., 438 U.S. 59, 89, 98 (1978) ("The legislative history of the liability-limitation provisions and the accompanying compensation mechanism reflects Congress's determination that reliance on state tort law remedies and state-court procedures was an unsatisfactory approach to assuring public compensation for nuclear accidents, while at the same time providing the necessary incentives for private development of nuclear-produced energy.").

213 Silkwood v. Kerr-McGee Corp., 464 U.S. 238, 249 (1984) (Blackmun, J., dissenting).

214 Justin Gundlach, Note, *What's the Cost of a New Nuclear Power Plant? The Answer's Gonna Cost You: A Risk-Based Approach to Estimating the Cost of New Nuclear Power Plants*, 18 N.Y.U. Envtl. L.J. 600, 630 (2011); *see also* Ayesha Rascoe, *U.S. Approves First New Nuclear Plant in a Generation*, Reuters (Feb. 9, 2012, 5:55 PM), https://www.reuters.com/article/us-usa-nuclear-nrc/u-s-approves-first-new-nuclear-plant-in-a-generation-idUSTRE8182J720120209 (noting that on February 9, 2012, the Nuclear Regulatory Commission voted to permit construction of two nuclear reactors at the Vogtle nuclear-power plant in Georgia, the first new reactors in more than thirty years).

215 *See* U.S. Nuclear Reg. Comm'n, *supra* note 47 (discussing the risks associated with plant construction, engineering, fuel costs, staffing, security, safety, and decommissioning, licensing, and waste management). Another reason the preemptive nature is essential is because radiation exposure and improper handling of materials or waste has the same consequence despite what state the harm occurs in..U.S. Nuclear Regulatory Comm'n, Backgrounder on the Three Mile Island Accident (Apr. 25, 2014), http://www.nrc.gov/reading-rm/doc-collections/fact-sheets/3mile-isle.html..U.S. Nuclear Regulatory Comm'n, Backgrounder on the Three Mile Island Accident (Apr. 25, 2014), http://www.nrc.gov/reading-rm/doc-collections/fact-sheets/3mile-isle.html.

216 *The Price-Anderson Act—Crossing the Bridge to the Next Century: A Report to Congress*, U.S. Nuclear Reg. Comm'n (Oct. 1983), https://www.nrc.gov/docs/ML0727/ML072760026.pdf (noting innovation with reliance on the PAA also because radiation exposure and improper handling of nuclear waste has the same consequence in Colorado as in Florida or New York).

217 *See, e.g., Fact Sheet: Obama Administration Announces Actions to Ensure that Nuclear Energy Remains a Vibrant Component of the United States' Clean Energy Strategy,* The White House, *available at* https://www.whitehouse.gov/the-press-office/2015/11/06/fact-sheetobama-administration-announces-actions-ensure-nuclear-energy.

218 *See* Petition for Writ of Certiorari at 5, Dow. v. Cook, 790 F.3d 1088 (10th Cir. 2015), No. 15-791); Nuclear Energy Agency-OECD, Paris Convention on Nuclear Third Party Liability (2014), https://www.oecd-nea.org/law/paris-convention.html.

219 Laura Rimsaite, *Nuclear Insurance Pools: Does the Horizontal Coorperation Lead to the Market Foreclosure?*, Am. Research Inst. for Policy Dev., (Dec. 2013), http://jblenet.com/journals/jble/Vol_1_No_1_December_2013/2.pdf.

220 A. Vinod Kumar, *Resolving India's Nuclear Liability Impasse,* Inst. for Def. Stud. & Analyses (Dec. 6, 2014), https://idsa.in/issuebrief/ResolvingIndiasNuclearLiabilityImpasse_kumarpatil_061214.

221 *See Nuclear Power in India*, World Nuclear Ass'n (Mar. 2018), *available at* http://www.world-nuclear.org/information-library/country-profiles/countries-g-n/india.aspx.

222 *See* Duke Power Co. v. Carolina Envtl. Study Grp., 438 U.S. 59, 64 (1978) (finding that the risk of potentially vast liability discouraged the growth of a private nuclear power industry).

223 *See* Cardwell, *supra* note 42.

224 Cook v. Rockwell Int'l Corp., 618 F.3d 1127 (10th Cir. 2010).

225 *In re* TMI Litigation Cases Consol., 940 F.2d 832, 854 (3d Cir. 1991) ("After the Amendments Act, no state cause of action based upon public liability exists. A claim growing out of any nuclear incident is compensable under the terms of the Amendments Act or it is not compensable at all."); Cotroneo v. Shaw Env't & Infrastructure, Inc., 639 F.3d 186, 192, 197 (5th Cir. 2011) ("[A] plaintiff who asserts any claim arising out of a 'nuclear incident' as defined in the PAA, 42 U.S.C. § 2014(q), can sue under the PAA or not at all," and to allow parties to recover under state law for lesser occurrences would

"circumvent the entire scheme governing public liability actions."); Nieman v. NLO, 108 F.3d 1546, 1553 (6th Cir. 1997) ("the state law causes of action cannot stand as separate causes of action, . . ."); O'Conner v. Commonwealth Edison Co., 13 F.3d 1090, 1105 (7th Cir. 1994) ("a new federal cause of action supplants the prior state cause of action. . . . [S]tate regulation of nuclear safety, through either legislation or negligence actions, is preempted by federal law."); *In re* Hanford Nuclear Reservation Litig., 534 F.3d 986, 1009 (9th Cir. 2008) ("[t]he PAA is the exclusive means of compensating victims for any and all claims arising out of nuclear incidents."); Roberts v. Fla. Power & Light Co., 146 F.3d 1305, 1306 (11th Cir. 1998) ("Congress passed the Price–Anderson Amendments Act of 1988 . . . creating an exclusive federal cause of action for radiation injury").

[226] *In re TMI Litig. Cases Consol. II*, 940 F.2d at 852-53 (noting that approximately every ten years since enacting Price-Anderson Act, Congress has amended it, continually building a comprehensive federal structure that has governed and regulated the nuclear industry).

[227] *O'Conner*, 13 F.3d at 1100, 1105 ("Congress recognized that state law would operate in the context of a complex federal scheme which would mold and shape any cause of action grounded in state law and that Price-Anderson operates within "a stringent regulatory background.").

[228] *Id.* at 1105 *aff'd*, 13 F.3d 1090 (7th Cir. 1994).

[229] International Atomic Energy Agency, Convention on Supplementary Compensation for Nuclear Damage, July 22, 1998, I.A.E.A. INFCIRC/567 (reflecting key principles that nuclear liability law should contain, in the U.S. and around the world for uniformity.

[230] Kolomitz, *supra* note 185.

[231] *See* Jose, *supra* note 93, at 9 and accompanying text.

## Endnotes: Recycling as a Nation

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policies-helped-south-koreas-capital-decrease-food-waste (explaining how the polluter-pay system for food waste has actually decreased the amount of food waste being produced and helped pay for the food recycling factories).

[33] Rothman, *supra* note 32.

[34] *Id.*

[35] *Id.*

[36] LC Paper, *supra* note 7, at 5.

[37] The 2nd 3R Int'l Scientific Conference on Material Cycles & Waste Management, Jang-Soo Lee et al., *Estimation of Green House Gas Emission Associated with Statistics of Waste Management in Korea*, (May, 2015), https://www.researchgate.net/publication/280644261_Estimation_of_Green_House_Gas_Emission_Associated_with_Statistics_of_Waste_Management_in_Korea?enrichId=rgreq-04fd5551ba4c67f6ca478a271a7c7295-XXX&enrichSource=Y292ZXJQY-WdlOzI4MDY0NDI2MTtBUzoyNzI0ODQxMTcyNTAwNTlAMTQ0MT-k3NjY4NDM4MA%3D%3D&el=1_x_2&_esc=publicationCoverPdf.

[38] Howard Fischer, *Forced recycling, plastic bag bans now illegal*, Az. Daily Sun (Apr. 14, 2015), http://azdailysun.com/news/local/forced-recycling-plastic-bag-bans-now-illegal/article_cc2abbc8-5de4-513d-bf1d-b3c4a1f2adb1.html.

[39] *Id.*

[40] Erin Schumaker, *The Psychology Behind Why People Don't Recycle*, Wash. Post (Aug. 3, 2016, 8:14 AM ET), https://www.huffingtonpost.com/entry/psychology-of-why-people-dont-recycle_us_57697a7be4b087b70be605b3.

## Endnotes: Wind Power and the Legal Challenges with NEPA and the ESA

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[33] Rosenberg, *supra* note 4, at 660; *see* Advantages and Challenges of Wind Energy, *supra* note 22 (citing wind power as "the largest renewable generation capacity of all renewables in the United States"); *see also* Juan Ramos, *Wind Energy Pros and Cons: The True Advantage of Wind Power*, Science Trends (Dec. 20, 2017), https://sciencetrends.com/wind-energy-pros-cons-true-advantage-wind-power/; *U.S. Wind Industry Fourth Quarter 2017 Market Report*, *supra* note 31, at 3 (reporting that the wind capacity within the United States at the end of 2017 includes 13,332 Megawatts under construction and 15,336 Megawatts in more complex stages of implementation).

[34] Rosenberg, *supra* note 4, at 660; *see* Advantages and Challenges of Wind Energy, *supra* note 22 (citing wind power as a clean renewable energy source that does not create any "atmospheric emissions that cause acid rain, smog, or greenhouse gases").

[35] Rosenberg, *supra* note 4, at 662; *see* Advantages and Challenges of Wind Energy, *supra* note 22 (stating wind does not emit any "particulate matter, nitrogen oxides, and sulfur dioxide" that have shown to produce economic disadvantages and problems related to human health).

[36] Rosenberg, *supra* note 4, at 662.

[37] Rosenberg, *supra* note 4, at 666; *see* Advantages and Challenges of Wind Energy, *supra* note 22 (describing need for construction of transmission lines to bring electricity from the farms to the cities); *see also* Merrill Matthews, *Challenges for Wind Energy's Future*, The Inst. for Policy Innovation (July 2014), http://www.ipi.org/docLib/20140728_ChallengesforWindEnergysFuture3.pdf (explaining that wind energy may require generating plants to have back up energy sources in case the wind energy is not constant and readily available); *see, e.g.* Kayla Matthews, *The Advancements and Challenges Affecting Wind Turbine Implementation*, Planetizen (Sept. 25, 2017, 5:00 AM), https://www.planetizen.com/node/94961/advancements-and-challenges-affecting-wind-turbine-implementation (discussing the geographical challenges related to wind farms).

[38] Rosenberg, *supra* note 4, at 665; *see* Jess White, *Disadvantages of Wind Energy*, Renewable Energy Spot, http://www.renewableenergyspot.com/disadvantages-of-wind-energy/ (discussing the varying efficiency and uniformity of wind energy).

[39] Rosenberg, *supra* note 4, at 666-67. The startup expenses for wind farms are expensive and sometimes not easily competitive with other electricity sources. Matthews, *supra* note 37; *see* White, *supra* note 38 (discussing the cost of wind turbines and the large amounts of land required to space out the wind turbines to avoid damage or collisions among them).

[40] Rosenberg, *supra* note 4, at 667; *see footnote* 37 for details on the geographical limitations of wind farms.

[41] Adam M. Dinnel & Adam M. Russ, *The Legal Hurdles to Developing Wind Power as an Alt. Energy Source in the United States: Creative and Comparative Solutions*, 27 Nw. J. Int'l. L. & Bus. 535, 537 (2007); *see also* Rosenberg, *supra* note 4, at 667-69; White, *supra* note 38 (discussing the effects of deforestation, noise from the turbines affecting bats and humans, and disruption to ecosystems originating from wind turbines).

[42] Rosenberg, *supra* note 4, at 668; *see Environmental Impacts of Wind Power,* Union of Concerned Scientists (Mar. 5, 2013), https://www.ucsusa.org/clean-energy/renewable-energy/environmental-impacts-wind-power#.WnczW5M-dsM.

[43] Rosenberg, *supra* note 4, at 668-69; *see also* Advantages and Challenges of Wind Energy, *supra* note 22; Marc Kavinsky, *Wind Farm Interference Shows Up on Doppler Radar*, Nat'l Weather Serv., https://www.weather.gov/mkx/windfarm (last visited Feb. 26, 2018) (addressing wind farms interference with the radar line of sight of the Doppler radar at the Wisconsin National Weather Service office); *see generally* U.S. Dep't of Energy, Efficiency & Renewable Energy, Fed. Interagency Wind Turbine Radar Interference Mitigation Strategy (Jan. 2016), https://energy.gov/sites/prod/files/2016/06/f32/Federal-Interagency-Wind-Turbine-Radar-Interference-Mitigation-Strategy-02092016rev.pdf.

[44] Rosenberg, *supra* note 4, at 669; *see* Purdue University, *Wind Turbines Killing More Than Just Local Birds,* SCIENCE DAILY (Sept. 29, 2016), https://www.sciencedaily.com/releases/2016/09/160929143808.htm (discussing the effects of wind farms on golden eagles).

[45] *Wildlife and Wind Energy*, OHIO DEP'T OF NAT. RES. DIV. OF WILDLIFE, http://wildlife.ohiodnr.gov/species-and-habitats/fish-and-wildlife-research/wildlife-and-wind-energy (last visited Feb. 26, 2018). This is known as Senate bill 221. *Id.; see* OHIO REV. CODE § 4298.64 (2018).

[46] *See* OHIO REV. CODE § 4298.64.

[47] Brandon Baker, *Ohio Gov. John Kasich Signs Nation's First Renewable Energy Freeze,* ECOWATCH (June 13, 2014, 3:25 PM), http://www.ecowatch.com/ohio-gov-john-kasich-signs-nations-first-renewable-energy-freeze-1881923801.html. Ohio Governor John Kasich's signature put the renewable portfolio standard on hold until 2017 as a committee will address at that time whether the bill's passage will be permanently frozen. *Id.* This freeze effectively "halted the requirements for the renewable energy at 2014 levels." Lauren Miller, *Ohio's Renewable Portfolio Standard: It's Time for a Thaw,* SOLSYSTEM (Oct. 19, 2016), http://www.solsystems.com/blog/tag/freeze/. Instead of an increase in its renewable energy initiatives, Ohio has mandated only 2.5% of energy from renewable energy sources. *Id.* As of January 1, 2017, the freeze will stop. *Id.* Governor John Kasich vetoed against continuing the freeze allowing renewable energy to grow. Jim Provance, *Kasich Vetoes Bill Delaying Renewable Energy Mandates*, THE BLADE, (Dec. 27, 2016, 4:18 PM) http://www.toledoblade.com/Energy/2016/12/27/Ohio-governor-vetoes-bill-making-renewable-mandates-optional.html. Ohio Revised Code 4928.64 was amended in September 2017 extending the mandate to 2027 to meet the 12.5% mandate. *Id.; see also* § 4298.64 (2017) (focusing on House Bill 49).

[48] *U.S. Wind Indus. 2016 Annual Market Update*, *supra* note 21.

[49] *Id.*

[50] *About the OPSB,* OHIO POWER SITING BD., http://www.opsb.ohio.gov/opsb/index.cfm/About/ (last visited Feb. 26, 2018).

[51] *Id.*

[52] *Id.*

[53] OHIO REV. CODE §§ 4906.03, 4906.04 (2018).

[54] *Id.* § 4906.02.

[55] *Id.; see About the OPSB, supra* note 50.

[56] OHIO REV. CODE § 4906.02 (2018); *see About the OPSB, supra* note 50.

[57] OHIO REV. CODE § 4906.02 (2018); *see About the OPSB*, *supra* note 50.

[58] OHIO REV. CODE § 4906.01 (2018); *see About the OPSB, supra* note 50;

[59] *About the OPSB, supra* note 50; *see* §§ 4906.13, 4906.20, 4906.98.

[60] OHIO ADMIN. CODE 4906-3-03(A) (2018); *see also Standard Application Process Flowchart,* OHIO POWER SITING BD. (June 7, 2017), https://www.opsb.ohio.gov/information/process-flowchart/.

[61] OHIO ADMIN. CODE 4906-3-03(B)(1) (2018); *About: How Can I Participate in the Process?* OHIO POWER SITING BD., [hereinafter *How Can I Participate in the Process?*] http://www.opsb.ohio.gov/opsb/index.cfm/About/ (last visited Feb. 8, 2018).

[62] *How Can I participate in the Process?*, *supra* note 61.

[63] OHIO REV. CODE §4906.06 (2018); OHIO ADMIN. CODE 4906-2-02 (2018); *see also Standard Application Process Flowchart, supra* note 60.

[64] *How Can I Participate in the Process?*, *supra* note 61.

[65] OHIO ADMIN. CODE 4906-3-06 (2015); *see also Standard Application Process Flowchart, supra* note 60.

[66] OHIO ADMIN. CODE 4906-3-06 (2015); *see Standard Application Process Flowchart, supra* note 60.

[67] *See* OHIO ADMIN. CODE 4906-3-07 (2015) (describing the requirements an applicant must follow once the applicant receives notification from the chairman that the standard certificate application is complete).

[68] *See Application Fees and Billing,* OHIO POWER SITING BD., http://www.opsb.ohio.gov/opsb/index.cfm/application-fees-and-billing/ (last visited Mar. 22, 2018) (delineating the power siting application fees for Ohio).

[69] *Standard Application Process Flowchart, supra* note 60. For filing fees and other costs associated with the application process, *see Application Fees and Billing*, *supra* note 69; *see also* OHIO ADMIN. CODE 4906-1-04, 4906-3-12 (2015).

[70] *How Can I Participate in the Process?*, *supra* note 61; *see* OHIO ADMIN. CODE 4906-2-09 (2018) (describing the protocol for hearings); OHIO REV. CODE § 4906.07(A) (2018) (discussing scheduling for hearings).

[71] *How Can I Participate in the Process?*, *supra* note 61.

[72] *Id.*

[73] *Id.* (limiting the amount of cases a participant can be involved).

[74] *Who is Involved in the Siting Process?* OHIO POWER SITING BD., http://www.opsb.ohio.gov/opsb/index.cfm/about/ (last visited Mar. 23, 2018) (defining who can be an intervener).

[75] *How Can I Participate in the Process?*, *supra* note 61.

[76] OHIO ADMIN. CODE 4906-3-09(A)(1) (2015); *see also Standard Application Process Flowchart, supra* note 60.

[77] *See Standard Application Process Flowchart, supra* note 60.

[78] OHIO REV. CODE § 4906.07(C) (2018); *see also Standard Application Process Flowchart, supra* note 60.

[79] OHIO ADMIN. CODE 4906-3-09(A)(2) (2018); *see also Standard Application Process Flowchart, supra* note 60.

[80] OHIO REV. CODE § 4906.07(A) (2018); OHIO ADMIN. CODE 4906-2-09(A) (2018); *see also Standard Application Process Flowchart, supra* note 60.

[81] *Ohio Power Siting Bd. Wind Summary*, OHIO POWER SITING BD., http://www.opsb.ohio.gov/opsb/index.cfm/About/ (last visited Feb. 27, 2018).

[82] *How Can I Participate in the Process?*, *supra* note 61.

[83] *Id.*

[84] *Id.*

[85] OHIO REV. CODE § 4906.10(A); OHIO ADMIN. CODE 4906-2-30 (2018); *see also Standard Application Process Flowchart, supra* note 60.

[86] OHIO REV. CODE § 4903.10 (2018); OHIO ADMIN. CODE 4906-2-32 (2018); *How Can I Participate in the Process?*, *supra* note 61.

[87] OHIO REV. CODE § 4903.10 (2018); OHIO ADMIN. CODE 4906-2-32 (2018); *How Can I Participate in the Process?*, *supra* note 61.

[88] OHIO REV. CODE § 4903.13 (2018); OHIO ADMIN. CODE 4906-2-33 (2018); *How Can I Participate in the Process?*, *supra* note 61.

[89] *Ohio Power Siting Bd. Wind Summary*, OHIO POWER SITING BD., http://www.opsb.ohio.gov/opsb/?LinkServID=895FE98C-C363-FCF9-6BFDC7D-F3A3F7AA2 (last updated Feb. 5, 2018).

[90] *Id.* Timber Road IV and Seneca are both in the pre-application stages.

[91] Provance, *supra* note 47.

[92] Dinnel & Russ, *supra* note 41, at 562; *see also* 42 U.S.C. §§ 4321-47 (2016).

[93] *Council on Environmental Quality,* OFFICE OF NEPA POLICY AND COMPLIANCE, http://energy.gov/nepa/council-environmental-quality-ceq (last visited Feb. 27, 2018); *see* 42 U.S.C. §§ 4341-47 (2016). The Center on Environmental Quality ("CEQ") provides guidance and interprets regulations that seek to apply NEPA. *Council on Environmental Quality*, THE WHITE HOUSE, https://www.whitehouse.gov/ceq/ (last visited Feb. 27, 2018). Also, the CEQ reviews federal agencies' compliance with NEPA, reviews emergent situations to allow substitute NEPA compliance, and supervises federal agencies' application of the environmental impact statements process. *Id.*

[94] 42 U.S.C. § 4321 (2016).

[95] Shearwater v. Ashe, No. 14-CV-026830-LHK, 2015 U.S. Dist. LEXIS 106277, at *3 (N.D. Cal. Aug. 11, 2015) (quoting High Sierra Hikers Ass'n v. Blackwell, 390 F.3d 630, 639 (9th Cir. 2004)).

[96] 42 U.S.C. § 4332(2)(C) (2018); *see* Dine Citizens Against Ruining Our Env't v. Klein, 747 F. Supp. 2d 1234, 1264 (D. Colo. 2010) (holding that the surface coal mining's permit revision application, a federal action, did not comply with NEPA, vacated the permit approval, and laid out the requirements to comply with NEPA).

[97] 5 U.S.C. § 702 (2018); *see* COUNCIL ON ENVTL. QUALITY, EXEC. OFFICE OF THE PRESIDENT, A CITIZEN'S GUIDE TO THE NEPA: HAVING YOUR VOICE HEARD 30 (2007), [hereinafter A CITIZEN'S GUIDE TO THE NEPA] https://energy.gov/sites/prod/files/nepapub/nepa_documents/RedDont/G-CEQ-CitizensGuide.pdf.

[98] 42 U.S.C. § 4332(2)(C)(i)–(v) (2018); *see National Environmental Policy Act Review Process*, U.S. ENVTL. PROTECTION AGENCY (Jan 24, 2017), https://www.epa.gov/nepa/national-environmental-policy-act-review-process (explaining that federal agencies must perform an EIS "if a proposed federal action is determined to significantly affect the quality of the human environment"). The U.S. Department of Energy has provided a comprehensive summary of the NEPA process; *see* U.S. DEP'T OF ENERGY, DOE, NEPA, AND YOU: A GUIDE TO PUBLIC PARTICIPATION 1–2 (2010), http://energy.gov/sites/prod/files/nepapub/nepa_documents/RedDont/G-DOE-NEPA_Brochure.pdf; *see also* 40 C.F.R. § 1506.9 (2018) (providing an overview of the EIS filing requirements); 40 C.F.R. § 1506.10 (2018) (explaining the requirements of time regarding a federal agency's action).

[99] *National Environmental Policy Act Review Process*, *supra* note 98. 42 U.S.C. § 4332 (2018). The draft EIS that the federal agency creates includes a variety of items: (1) purpose and need of the document (*see* 40 C.F.R. § 1502.13 (2016)); (2) identification and examination of alternative methods

to satisfy the potential action's purpose and need (*see* 40 C.F.R. § 1502.14 (2018)), including preferred alternatives (*see* 40 C.F.R. § 1502.14(e)) (2018)); and the "full range of direct, indirect and cumulative effects of the preferred alternative, if any, and of the reasonable alternatives identified in the draft EIS." A CITIZEN'S GUIDE TO THE NEPA, *supra* note 97, at 17 (citing 40 C.F.R. §§ 1508.7, 1508.8 (2018)). The draft EIS should also address the human impact on the environment. *See* 40 C.F.R. § 1508.14 (2018)); *see also* A CITIZEN'S GUIDE TO THE NEPA, *supra* note 97, at 16–18 (for a more in-depth discussion).

[100] 40 C.F.R. § 1508.18(a) (2018).

[101] 40 C.F.R. § 1508.22 (2018); *see National Environmental Policy Act Review Process*, *supra* note 98.

[102] *See National Environmental Policy Act Review Process*, *supra* note 98.

[103] 40 C.F.R. § 1506.10 (2018); *see* A CITIZEN'S GUIDE TO THE NEPA, *supra* note 97, at 16; *see generally, How Citizens Can Comment and Participate in the National Environmental Policy Act Process?,* U.S. ENVTL. PROTECTION AGENCY, https://www.epa.gov/nepa/how-citizens-can-comment-and-participate-national-environmental-policy-act-process (last visited Feb. 6, 2018) (noting that agencies must provide at minimum of forty-five days for public comment).

[104] 40 C.F.R. § 1506.10(c) (2018); *see* A CITIZEN'S GUIDE TO THE NEPA, *supra* note 97, at 16.

[105] 40 C.F.R. §§ 1506.10(a), (b)(2), 1503.4 (2018).

[106] *Id.* § 1506.10. When the termination of the thirty days is less than ninety days after the Federal Register published the Notice of Availability of the Draft EIS, the agency's decision is required to wait for the ninety-day period to finish. *See* A CITIZEN'S GUIDE TO THE NEPA, *supra* note 97, at 18. Sometimes, a federal agency may conclude a potential action as "environmentally unacceptable" and refer the problem to the CEQ during the following twenty-five days subsequent to the issued Notice of Availability for the final EIS. *Id.* at 18–19. Further discussion of this is beyond the scope of this author's paper.

[107] 40 C.F.R. § 1505.2 (2018).

[108] 40 C.F.R. § 1502.9(c) (2018); *National Environmental Policy Act Review Process*, *supra* note 98; *see* A CITIZEN'S GUIDE TO THE NEPA, *supra* note 97, at 20.

[109] 40 C.F.R. § 1502.9(c)(4) (2018); *see National Environmental. Policy Act Review Process*, *supra* note 99; *Impact Statements (EIS): When is a Supplement to the EIS required*, U.S. ENVTL. PROTECTION AGENCY, https://www.epa.gov/nepa/national-environmental-policy-act-review-process (last visited Feb. 4, 2018).

[110] 40 C.F.R. §§ 1501.3, 1501.4, 1508.9 (2018).

[111] *Id.* § 1508.9.

[112] *Id.; see Environmental Assessment/ Finding of No Significant Impact,* U.S. ENVTL. PROTECTION AGENCY, https://www.epa.gov/nepa/national-environmental-policy-act-review-process (last visited Mar. 17, 2018) (recognizing the purpose of an environmental assessment).

[113] *Id.* For the including text, *see also,* A CITIZEN'S GUIDE TO THE NEPA, *supra* note 97, at 11 (summarizing the contents of an environmental assessment).

[114] 40 C.F.R. § 1508.13 (2018) (circumstances that necessitate a FONSI).

[115] *Id.; see Environmental Assessment/ Finding of No Significant Impact*, *supra* note 112 (explaining why a FONSI would be issued).

[116] *Id.* (explaining what happens when a federal action is found to have significant environmental impact).

[117] 40 C.F.R. § 1508.4 (2018) (stating what kinds of actions are categorically excluded from requiring an EA or an EIS).

[118] *Id.; see also* A CITIZEN'S GUIDE TO THE NEPA, *supra* note 97, at 10-11 (laying out what situations require an agency to prepare an EA or an EIS).

[119] 40 C.F.R. § 1508.4 (2018); *see also* A CITIZEN'S GUIDE TO THE NEPA, *supra* note 97, at 10-11 (recognizing that actions that are classified as categorical exclusions may still impact the environment).

[120] Ezekiel J. Williams & Kathy L. Schaeffer, *What Every Land Professional Should Know about NEPA*, LA. ST. U. MIN. LAW INST. 8 (2007) (citing to Ka Makani O'Kohala Inc., v. Dep't of Water Supply, 295 F.3d 955, 960 (9th Cir. 2002), and laying out what actions are subject to NEPA oversight).

[121] *Id.* (triggering NEPA regulation because of the required federal authorization, permission, or finances).

[122] *Id.* (highlighting a particular federal action that triggers NEPA regulation).

[123] Sarah Matsumoto et al., *Citizens' Guide to the Endangered Species Act*, EARTH JUSTICE 11 (2003), http://earthjustice.org/sites/default/files/library/reports/Citizens_Guide_ESA.pdf (explaining why Congress enacted and President Nixon signed the Endangered Species Act).

[124] 16 U.S.C. § 1531(c)(1) (2018); Dinnel & Russ, *supra* note 41, at 559. The Act also safeguards subspecies and distinct population segments of species as well. Matsumoto et al., *supra* note 123, at 12 (addressing how the ESA works to maintain genetic diversity).

[125] *Summary of the Endangered Species Act*, U.S. ENVIRONMENTAL PROTECTION AGENCY (Aug. 8, 2017), https://www.epa.gov/laws-regulations/summary-endangered-species-act; *see also* Matsumoto et al., *supra* note 123, at 12 (naming two, among several, federal agencies that operate under the ESA).

[126] Shearwater v. Ashe, No. 14-CV-026830-LHK, 2015 U.S. Dist. LEXIS 106277, at *7 (N.D. Cal. Aug. 11, 2015) (requiring that federal actions do not jeopardize the continued existence of any endangered species).

[127] 16 U.S.C. § 1538(a)(1)(B) (2018); *see also Endangered Species Act: Section 9*, U.S. FISH & WILDLIFE SERV. (July 15, 2013), https://www.fws.gov/endangered/laws-policies/section-9.html.

[128] 16 U.S.C. § 1533 (2018); *see* Matsumoto et al., *supra* note 123, at 15 (detailing the listing process).

[129] *Endangered Species Act,* NAT'L WILDLIFE FED'N, https://www.nwf.org/Educational-Resources/Wildlife-Guide/Understanding-Conservation/Endangered-Species (last visited Mar. 17, 2018) (defining the mandate of the ESA and defining endangered species).

[130] *Id.*

[131] Matsumoto, *supra* note 123, at 15 (addressing the listing process).

[132] 16 U.S.C. § 1533(b)(5)(A) (2018); *see also,* Matsumoto et al., *supra* note 123, at 15.

[133] 16 U.S.C. § 1533(a)(6)(A) (2018); *see also,* Matsumoto et al., *supra* note 123, at 15.

[134] Matsumoto et al., *supra* note 123, at 15, 17 (addressing the listing process). The species as a potential candidate for listing remains pending until the FWS or the NOAA Fisheries re-evaluate it, a process that occurs at least once a year where the FWS or the NOAA Fisheries finally determine whether the species should be listed. *Id.* Sometimes, the result for the listing of the species may be "'warranted but precluded'" when the Secretary of Interior or Commerce has to decide on different species first. *See* 16 U.S.C. § 1533(b)(3)(B)(iii) (2018).

[135] § 1533(b)(3)(A) (2018); *see also,* Matsumoto et al., *supra* note 125, at 18 (addressing citizens' petitions).

[136] Matsumoto et al., *supra* note 123, at 18.

[137] 16 U.S.C. § 1533(b)(3)(A) (2018); *see also* Matsumoto, *supra* note 123, at 18.

[138] 16 U.S.C. § 1540(g)(1) (2018); *see infra* note 168.

[139] 16 U.S.C. § 1533(a)(3)(A) (2018); *see* Dinnell, *supra* note 41, at 559.

[140] Matsumoto et al., *supra* note 123, at 20 (discussing critical habitats); *see* 16 U.S.C. § 1532(5) (2018). The United States Court of Appeals for the Ninth Circuit concluded that a finding of "harm" did not mandate a particular member of the species to die, but even habitat destruction that could result in the species' elimination could be categorized as "harm" and is not permitted under Section 9 of the ESA. Palila v. Hawaii Dep't of Land and Nat. Res., 852 F.2d 1106, 1108, 1110 (9th Cir. 1981) (defining "take" using the broadest definition where sheep and goats fed on mamane seeds that eliminated trees for the Palila birds). Moreover, the United States' Supreme Court held that the "ordinary meaning of 'harm' naturally encompasses habitat modification that results in actual injury or death to members of an endangered or threatened species." Babbitt v. Sweet Home Chapter of Communities for a Great Oregon, 515 U.S. 687, 699, 701-04 (1995) (concluding that indirect and direct actions may be considered as a take, given the Act provides broad protection).

[141] 16 U.S.C. § 1533 (a)(3)(A) (2018); *see also* Dinnell & Russ, *supra* note 41, at 559.

[142] 16 U.S.C. § 1533 (b)(2) (2018); *see* Matsumoto et al., *supra* note 123, at 20 (discussing critical habitats). A critical habitat evaluates "physical and biological habitat features: [s]pace for individual and population growth and for normal behavior; [c]over and shelter; [f]ood, water, air, light, minerals, or other nutritional or physiological requirements; [s]ites for breeding and rearing offspring; [and] [h]abitats that are already protected from disturbances or are representative of the historical, geographical, and ecological distribution of a species." *Id.* An economic analysis may be included as well. *Id.*

[143] 50 C.F.R. § 424.12(a)(1) (2018); *see* Dinnell & Russ, *supra* note 41, at 559-60.

[144] 16 U.S.C. § 1533(b)(2) (2018).

[145] Matsumoto et al., *supra* note 123, at 21.

[146] 16 U.S.C. § 1533(b)(8) (2018).

[147] Matsumoto et al., *supra* note 123, at 21. Similar to listing, the critical habitat's designation is the rulemaking process. *Listing and Critical Habitat,* U.S. FISH & WILDLIFE SERV. (Jan. 12, 2015), https://www.fws.gov/endangered/what-we-do/critical-habitats-faq.html. A private individual may have his or her

land become designated as a section of a critical habitat, but this only occurs when the private individual receives federal funding, a federal permit, or a federal action. *Id.* The FWS may additionally create recovery plans for species as well. Matsumoto et al., *supra* note 123, at 22 (focusing on critical habitats). A recovery plan focuses on the reversal of an endangered or threatened species' diminution and the deletion of threats, such that the listed species will thrive. *Id.* (citing to *Endangered Species Recovery Program*, U.S. Fish and Wildlife Service Endangered Species Program (June 2011), https://www.fws.gov/endangered/esa-library/pdf/recovery.pdf). 16. U.S.C. § 1533(f) (2018) mandates the government to create and apply recovery plans, except where the plan would not preserve the listed species. *Id.* A recovery plan involves: "a description of site-specific management plans that may be necessary to achieve conservation and survival of the species; a recovery objective (i.e. a target population number) and a list of criteria for indicating when the objective has been achieved; an implementation schedule with task priorities and cost estimates; [and] a recovery plan may also call for species reintroduction, habitat acquisition, captive propagation, habitat restoration and protection, population assessments, research and technical assistance for landowners, and public education." *Id.* Many different actors come into play, and the FWS develops a guide for the recovery plan's design, including peer review and public commentary. *Id.* at 24 (discussing critical habitats). Once an endangered species has recovered, the species is considered to be "delisted" from the endangered species' list under the ESA. *Id.* A species may also be "'downlisted'" from its consideration as endangered to threatened. *Id.*

[148] 16 U.S.C. § 1536(a)(1) (2018).

[149] *Id.; see also* Matsumoto et al., *supra* note 123, at 29 (examining Section 7 of the ESA).

[150] 50 C.F.R. § 402.14(a) (2018) (listing the consultation requirement).

[151] 50 C.F.R. § 402.14(e), (g)(4) (2018) (clarifying the FWS' mandates and suggestions regarding the mitigation of the harmful effects on activities involving "fish, wildlife, [and] plants" as well as their relative habitats); Stephanie Clark & Sue Meyer, *U.S. Fish and Wildlife Service Announces Changes to Mitigation Policy*, JDSUPRA (Dec. 12, 2016), http://www.jdsupra.com/legalnews/u-s-fish-and-wildlife-service-announces-17013/. The FWS implemented its modifications after the *Presidential Memorandum: Mitigating Impacts on Natural Resources from Development and Encouraging Related Private Investment* was issued. *Id.* The *Presidential Memorandum* instructed the FWS to "finalize a mitigation policy to establish principles to guide the [FWS] in its planning and permitting practices and other activities." *Id.* The aforementioned policy establishes a guideline regarding the implementation of "a landscape-scale approach to mitigation to achieve a net gain in conservation outcomes, or at a minimum, no net loss of resources and their values, services, and functions resulting from proposed actions." *Id.* When an activity requires a "Section 7 biological opinion and incidental take statements [or] Section 10 incidental take permits," the activity will deal with the FWS' "statutory and regulatory" mandates pursuant to the ESA and the policy's published modifications. *Id.* The FWS could potentially implement the policy when the FWS maintains "a statutory or regulatory mandate" that obligates mitigation like with ESA or when the FWS gives suggestions for conservation as an agency complying with the National Environmental Policy Act. *Id.* For more information on the implemented modifications, *see* 81 Fed. Reg. 83440-83492 (2016).

[152] 50 C.F.R. § 402.14 (g)(4) (2018) (outlining the purpose for formulating a biological opinion).

[153] *See* 50 C.F.R. § 402.13 (2018) (noting that, during informal consultation, if the Federal agency and Service agree that the action will not adversely affect the listed species or critical habitat, there is no need for further consultation).

[154] *See* Matsumoto et al., *supra* note 123, at 31 (focusing on biological opinions, which are scientific documents used to both assess a project's potential impact to a protected species as well as recommends measures if the project is "likely to jeopardize the continued existence" or harm the critical habitat).

[155] *Id.* (including alternative such as moving a planned road to avoid an eagle nest and delaying construction of a structure until after mating season is done).

[156] Shearwater v. Ashe, No. 14-CV-026830-LHK, 2015 U.S. Dist. LEXIS 106277, at *7 (N.D. Cal. Aug. 11, 2015) (quoting to 50 C.F.R. § 402.13(a) (2018)).

[157] *Id.* at *9 (quoting to 50 C.F.R. § 402.13(a), 402.14(a)-(b) (2018)).

[158] 16 U.S.C. § 1538 (a)(1)(B) (2018) (prohibiting the taking of endangered species of fish or wildlife).

[159] *Id.*; *Id.* § 1532(19) (defining the term "take" as "to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct").

[160] Matsumoto et al., *supra* note 123, at 32 (examining the ESA's prevention on takings); *See supra* note 142 and accompanying text discussing what constitutes a take under the ESA.

[161] Dinnel & Russ, *supra* note 41, at 560 (citing to Christopher Carter, *A Dual Track for Incidental Takings: Reexamining Sections 7 and 10 of the Endangered Species Act,* 19 B.C. Envtl. Aff. L. Rev. 135, 155 (1991), which refers to H.R. Rep. No. 304, 97th Cong. 2d. Sess. 31 (1982), *reprinted in* 1982 U.S.C.C.A.N. 2807, 2831, and Richard Webster, Note, *Habitat Conservation Plans Under the Endangers Species Act,* 24 San Diego L. Rev. 243, 247 (1987); *see also* Matsumoto, *supra* note 123, at 35 (evaluating the exceptions to the prohibition on takings Congress included in its 1982 amendments to the ESA).

[162] 16 U.S.C. § 1539(a)(1)(B) (2018) (permitting incidental taking of endangered species).

[163] 16 U.S.C. § 1539(a)(2)(A) (2018 (stating that participants, whose use constitutes a taking, need to obtain a permit from the Secretary).

[164] *Id.* § 1539(a)(2)(B) (stating that the secretary opens the application up for public comment).

[165] *Id.* (highlighting the minimization process).

[166] Matsumoto et al., *supra* note 123, at 35 (covering habitat conservation plants).

[167] Dinnel & Russ, *supra* note 41, at 561. (incentivizing the private individual through section 10 (a)(1)(B), the ESA assures the private individual that the government would expect more in the future for the listed species once an HCP is approved); Matsumoto et al., *supra* note 123, at 35, 37 (evaluating the no surprises exception within the ESA); *see What are No Surprise Assurances?*, U.S. Fish & Wildlife Serv. (July 15, 2013), https://www.fws.gov/endangered/what-we-do/hcp-faq.html (eliminating any unforeseen circumstances and permits minor changes, not affecting additional land nor expenses). An HCP also permits the private individual to enter into voluntary agreements with the federal government to safeguard endangered species. Matsumoto et al., *supra* note 123, at 37 (discussing safe harbors). These agreements permit the private individual to enhance his or her land for the protected species' benefit on a voluntary basis for a time duration, and consequently, may have the ability to return his or her land to the land's baseline without any ESA violation. *Id.* The FWS provides an "'enhancement for survival'" permit pursuant to section 10(a)(1)(A) that presents the individual the opportunity to return the property to its baseline when the time duration with the voluntary understanding finishes. *Id.*

[168] 16 U.S.C. § 1540 (2018) (outlining the civil and criminal penalties).

[169] *Id.* § 1540(g).

[170] *Id.*

[171] 16 U.S.C. § 1540(e) (2018).

[172] Matsumoto et al., *supra* note 123, at 14 (examining versions of states' ESAs).

[173] *See generally* Ohio Rev. Code §§ 1531.25, 1531.99 (2018).

[174] *Id.* § 1531.25.

[175] *Id.*

[176] *Id.*

[177] *Id.*

[178] *Id.*

[179] *Id.* § 1531.99 (indicating that a wind developer should be aware that this Ohio law exists. However, this law has been addressed rarely in litigation if a violation should occur within Ohio); *see* State v. Althiser, No. 97CA14, 1997 Ohio App. LEXIS 6054, at *15 (Ohio Ct. App. Dec. 30, 1997) (affirming the lower court's decision that officers' search into a storage bay to combat mussel poaching had probable cause with exigent circumstances); *see also* Wilkins v. Daniels, 744 F.3d 409 (6th Cir. 2014) (holding that microchipping animals was not an unconstitutional taking), *aff'd,* 913 F. Supp. 2d 517 (S.D. Ohio 2012).

[180] Ohio Admin. Code § 1501:31-23-01 (2018).

[181] *Id.* §§ 1501:31-23-01 (B), (C), (F).

[182] *Id.* § 1501:31-23-01 (D).

[183] *Id.* § 1501:31-23-02.

[184] *Id.* § 1531.25.

[185] *See* State v. Althiser, No. 97CA14, 1997 Ohio App. LEXIS 6054, at *15 (Ct. App. Dec. 30, 1997) (upholding petitioners' convictions under Ohio Rev. Code §§ 1531.25, 1531.02 for illegal possession of endangered mussels); *see also* Wilkins v. Daniels, 744 F.3d 409, 419 (6th Cir. 2014) (holding that provisions under Ohio Rev. Code §§ 935.01–935.99 relating to microchipping requirements for permitted owners of certain endangered species did not violate the Fifth Amendment). These cases illustrate that Ohio's version of the ESA is rarely used in litigation.

[186] *See* Union Neighbors United, Inc., v. Jewell, 831 F.3d 564, 570-71 (D.C. Cir. 2016) (concerning a wind developer who planned to construct and manage a commercial wind energy farm located on land that overlapped with the territory and migration patterns of the endangered Indiana bat).
[187] *Id.* at 57.
[188] *Id.* (noting that several months later, the FWS initiated a second round of public comments regarding plans to develop an EIS and HCP addressing impacts of Buckeye's proposed development).
[189] *Id.*
[190] *Id.* (specifying that the HCP included measures to minimize the effects on the Indiana bat and its habitat in addition to other non-listed birds and bats, and the HCP suggested the issuance of the ITP based on the HCP).
[191] *Id.* at 573.
[192] Union Neighbors United, Inc., v. Jewell, 831 F.3d 564, 573 (D.C. Cir. 2016).
[193] *Id.*
[194] *Id.* at 574 (noting that plaintiffs brought their lawsuit against the "Secretary of the Department of the Interior, the Director of the Service, and the Regional Director for Midwest region of the Service" seeking declaratory and injunctive relief).
[195] *Id.*
[196] *Id.*
[197] *Id.* at 574; *see* Union Neighbors, Inc., v. Jewell, 83 F.Supp.3d 280, 287-88 (D.D.C. 2015) (while providing a level of deference, the court decided FWS utilized the best evidence available at that time and properly concluded that the wind project's proposal's mitigation efforts would completely counterbalance the Indiana bats' taking).
[198] 831 F.3d, at 574.
[199] *Id.* at 575.
[200] *Id.* at 576.
[201] *Id.* (stating that the other alternative evaluated was the "Max Alternative" that would require the wind turbines be turned off at night between the months of April through October).
[202] *Id.*
[203] *Id.*
[204] *Id.* at 577 (stating that, "because the [FWS] in these circumstances did not consider any other reasonable alternative that would have taken fewer Indiana bats than Buckeye's plan, it failed to consider a reasonable range of alternatives and violated its obligations under NEPA").
[205] *Id.* at 568.
[206] *Id.* at 580 (applying *Skidmore v. Swift & Co.*, 323 U.S. 134 (1944)).
[207] *Id.* (discussing that the statutory definition of "'impacts' refers to more than the discrete number of individual members of a listed species").
[208] *Id.* at 581. (examining the Habitat Conservation Planning and Incidental Take Permit Processing Handbook ("Handbook") to conclude that relevant legislative history, though partially probative, is inconclusive).
[209] *Id.* at 582.
[210] *Id.* at 583.
[211] *Id.* at 582.
[212] *Id.*
[213] *Id.* at 582 (noting that the ESA uses the conjunctive "and" between "minimize" and "mitigate," rather than "then," suggesting that the terms should be read together, not as a sequence).
[214] *Id.* at 583 (evaluating the FWS's answers to the Handbook's commentary, which included a conclusion that "Buckeye 'ha[d] minimized the quantity of take'").
[215] *Id.* at 583.
[216] *Id.*
[217] *Id.* at 577.
[218] *Id.* at 578.
[219] *Id.* at 568-69.
[220] *Id.* at 568, 577.
[221] *See generally id.* at 568, 569-70.
[222] Sierra Club v. Kenna, No. 1:12-cv-1193 AWI JLT, 2013 LEXIS 4743, at *3, 4 (E.D. Cal. Jan. 11, 2013) (anticipating 102 turbines that would produce up to 300 megawatts of electricity, NSRE sought to build a wind farm on private land in the Sierra Nevada mountain range).
[223] *Id.* at *4.
[224] *Id.*
[225] *Id.*
[226] *Id.*
[227] *Id.* at *4-5.
[228] *Id.* at *2.
[229] *Id.* at *2, 5 (parties had agreed that the private road would be longer than the service road over the federal land and that the service road would involve more construction with affected acreage than the private road).
[230] *Id.* at *5-6 (contesting BLM's conclusion that the service road "would have value independent of its use as to an access road" for the development project).
[231] *Id.* at *7.
[232] *Id.* at *25.
[233] *Id.*
[234] *Id.*
[235] *Id.* at *25-26.
[236] *Id.* (concluding that the administrative record supported BLM's determination that NSRE could have finished the project without the right-of-way).
[237] *Id.*
[238] *Id.*
[239] *Id.* at *26.
[240] *Id.* at *29-30.
[241] *Id.* at *30.
[242] *Id.* at *32-33.
[243] *Id.* at *33-36 (declining to substitute its judgment for BLM, as it was not "permissible" pursuant to the standard of review; BLM maintained "wide deference" to its decisions and was the "primary intermediary . . . between private activity and public resource ownership").
[244] *Id.* at *36 (deciding the court was "in no position to impose a contrary conclusion simply because an opposing party is of the opinion that more proof should have been required").
[245] *Id.* at *34.
[246] *Id.* at *38.
[247] *Id.* at *40-41 (E.D. Cal. Jan. 11, 2013).
[248] Sierra Club v. BLM, 786 F.3d 1219, 1222 (9th Cir. 2015) (affirming Sierra Club v. Kenna, No. 1:12cv1193 AWI JLT, 2013 LEXIS 4743 (E.D. Cal. Jan. 11, 2013)).
[249] *Id.* at 1224 (holding that a federal agency's duty to consult on these direct effects occurs when the action is "affirmatively authorized, funded, or carried out [by a federal agency]" and "in which there is discretionary Federal involvement for control" (citing Karuk Tribe of Cal. v. Forest Serv., 681 F.3d 1006, 1020-21 (9th Cir. 2012)).
[250] *Id.*
[251] *Id.*
[252] *Id.* at 1224-25 (explaining the plaintiff must illustrate that an indirect effect is "caused by the action" (citing San Luis & Delta-Mendota Water Auth. v. Locke, 776 F.3d 971, 1009 (9th Cir. 2014)).
[253] *Id.* at 1225 (examining whether the action was an interrelated or interdependent action).
[254] *Id.* at 1225-26.
[255] *Id.* at 1226.
[256] *Id.* at 1226-27.
[257] Sierra Club v. Kenna, No. 1:12-cv-1193 AWI JLT, 2013 LEXIS 4743, at *26, 40-41 (E.D. Cal. Jan. 11, 2013); *BLM*, 786 F.3d at 1224, 1225-26.
[258] BLM, 786 F.3d at 1227; *Kenna*, 2013 U.S. Dist. LEXIS 4743 at *25, 26.
[259] *See generally BLM*, 786 F.3d 1219 (affirming Kenna, 2013 LEXIS 4743 at *16).
[260] Animal Welfare Inst. v. Beech Ridge Energy LLC, 675 F. Supp. 2d 540, 542 (D. Md. 2009).
[261] *Id.*
[262] *Id.* at 549-50.
[263] *Id.* at 550.
[264] *Id.*
[265] *Id.* (indicating that the project would result in 6,746 bat deaths yearly and noting that Indiana bats could be present at the site during the summer; however, none were found).
[266] *Id.* at 551.
[267] *Id.*
[268] *Id.* at 552.
[269] *Id.* at 551-53.
[270] *Id.* at 553.
[271] *Id.* at 554.
[272] *Id.* at 554-55 (describing that the Department additionally disregarded the FWS' recommendations and employed certain provisions within the order,

including site conditions before and after construction, specifically for endangered species).

[273] *Id.* at 555.

[274] *Id.* at 556.

[275] *Id.* at 556-57.

[276] *Id.* at 557 (stating that, at the time of trial, "foundations for [sixty-seven] turbines had been powered, turbine deliveries had commenced, and transmission lines were being strung in agreed upon areas").

[277] *Id.* at 542.

[278] *Id.*

[279] *Id.* at 557 (noting that a BHE employee claimed that he had utilized AnaBat detectors during the first summer of mist netting, in areas that were not ideal for capturing bats, and that BHE did not evaluate nor provide the data to the Department or FWS).

[280] *Id.* at 561, 563-64 (holding that under section 9 of the ESA, a plaintiff's suit had to demonstrate by a preponderance of evidence that "the challenged activity is reasonably certain to imminently harm, kill, or wound the listed species" and must address issues such as: "whether Plaintiffs have proven by a preponderance of evidence that (i) Indiana bats are present at the Beech Ridge Project site and (ii) the project is reasonably certain to imminently harm, kill, or wound Indiana bats, in violation of [section 9] of the ESA").

[281] *Id.* at 564-68.

[282] *Id.* at 568-69 (finding that although no conclusion can be made about the existence of maternity colonies at the site, the project constructed new habitat that could have attracted Indiana bats and that clearing the forest to build new transmission lines could develop lanes for Indiana bats' travel, thus expanding the possibility that the Indiana bats were at the project's location). *Id.* (giving "significant weight" to one expert's testimony that determined that the Indiana bats were present at the site).

[283] *Id.* at 575.

[284] *Id.*

[285] *Id.* at 575-76.

[286] *Id.* (stating that even though the higher elevation of the project's location makes it less possible, yet not improbable, that the maternity colonies are located there in the summer months, the Indiana bats could still exist at the location "during migration, fall swarming, and spring staging").

[287] *Id.* (concluding that although four hours of acoustic data was gathered and investigated during two consecutive nights, more acoustic surveillance over all four seasons and at various sites "would almost certainly yield a greater number of Indiana bat calls").

[288] *Id.*

[289] *Id.* at 577-78.

[290] *Id.* at 578.

[291] *Id.* at 578-79 (noting that all three of plaintiff's experts testified that the project would likely harm the Indiana bats and that the court was "not surprised" that the Indiana bats have not been found killed at any wind project since "few post-mortality studies have been conducted, mortality searches [were] generally insufficient, and Indiana bats [were] rare").

[292] *Id.* at 579.

[293] *Id.* at 579-80 (determined awarding injunctive relief because the defendants would not apply adaptive management after the project was completed, and the defendants disregarded the FWS' correspondence advising preconstruction surveys and methods).

[294] *Id.* at 580-81 (using this mandate as a form of injunctive relief).

[295] *See id.* at 581-83 (concluding "that the only avenue available to Defendants to resolve the self-imposed plight in which they now find themselves is to do belatedly that which they should have done long ago: apply for an ITP"); *see e.g.* Protect Our Cmty. Found. v. Ashe, No. 12-cv-2212-GPC(PCL), 2013 LEXIS 165987, at *2, 12, 32, 36 (S.D. Cal. Nov. 20, 2013) (finding that where a wind power plant complied with an issued incidental take permit and with the ESA, the challenged biological opinion regarding the endangered species was not arbitrary or capricious). *See also* Protect Our Lakes v. U.S. Army Corps of Eng'r, No. 1:13-CV-402-JDL, 2015 WL 732655, at *1, 5 (D. Me. Feb. 20, 2015) (addressing whether the issuance of the section 404 permit for a wind power development project violated the ESA and the Bald and Gold Eagle Protection Act).

[296] *See generally Ashe*, 2013 LEXIS 165987, at *10-11 (S.D. Cal. Nov. 20, 2013) (quoting 50 C.F.R. § 402.14(g)(1)-(4); (h)(3)) (stating "the consulting agency must 'review all relevant information, evaluate the current status of the listed species or critical habitat, evaluate the effects of the action and cumulative effects on the listed species or critical habitat,' and issue a Biological Opinion assessing whether the proposed action is 'likely to jeopardize the continued existence of a listed species or result in the destruction or adverse modification of critical habitat').

[297] Union Neighbors United, Inc., v. Jewell, 831 F.3d 564, 568-69 (D.C. Cir. 2016).

[298] *See Animal Welfare Inst.*, at 583 (concluding that construction of Defendant's wind project would have violated the ESA and Defendants should have applied for an incidental take permit); Sierra Club v. BLM, 786 F.3d 1219 (9th Cir. 2015) (holding that although the Bureau of Land Management's federal road project was subject to NEPA, its wind project, which granted "a right-of-way over federal land for a wind energy project developed on private land," was not because the wind project was not a federal action or connected to the road project.); *aff'g* Sierra Club v. Kenna, No. 1:12 –cv-1193 AWI JLT, 2013 LEIXIS 4743 (E.D. Cal. Jan. 11, 2013); Union Neighbors United, 831 F.3d at 568-69 (finding that NEPA applied where the United States Fish and Wildlife service granted an incidental take permit to Defendant for construction of a wind farm).

[299] Protect Our Cmty. Found. v. Salazar, No. 12cv2211-GPC(PCL), 2013 LEXIS 159281, at *2 (S.D. Cal. Nov. 6, 2013).

[300] *Id.*

[301] *Id.* at *4.

[302] *Id.* at *7.

[303] *Id.* at *7-9, 10-13 (evaluating the NEPA, what the EIS should include, and the standard of reasonableness that the EIS should include. Based upon BLM's statement for purpose and need, the court determined that the BLM's "Purpose and Need" detailed how the wind project would promote BLM to execute the executive and Department of Interior's orders and a separate section addressed the project's goals).

[304] Protect Our Cmty. Found. v. Salazar, No. 12cv2211-GPC(PCL), 2013 LEXIS 159281, at *13-14 (S.D. Cal. Nov. 6, 2013).

[305] *Id.* at *14-15 (reasoning that the Final EIS showed BLM's rationale for the elimination of the renewable energy alternatives besides wind power and BLM determined six alternatives were reasonable and included a No Project/Action Alternative as well. Therefore, the court determined that BLM reasonably examined the alternatives).

[306] *Id.* at *3-4, 16 (finding that the project's location was the "only area with high wind density." (citing to OWEF 908; 914 (the filed Administrative Record). Other locations are in use or proposed for different wind energy plans (citing OWEF 908). *Id.* Other private properties did not have wind energy possibilities (citing OWEF 907). *Id.* Also, locating the project outside of the county would defeat BLM's purpose and need. *Id.*

[307] *Id.* at *16-17.

[308] *Id.* at *17-24 (acknowledging that BLM had deference with its expertise and knowledge. The court also compared the studies that the Plaintiffs and BLM supported their respective positions with. The court finally examined that BLM conducted its only studies of inaudible noise and concluded that the impacts from inaudible sounds were "minimal." The court recognized that "it [was] not the Court's role to determine which scientific studies that BLM should adopt" and should provide deference to BLM's conclusion).

[309] *Id.* at *23-24.

[310] *Id.* at *24.

[311] *Id.* at *24-28 (noting that a disagreement with the agency's use of certain methods was not considered a NEPA violation the court reasoned (citing Native Ecosystems Council v. Weldon, 697 F.3d 1043, 1053 (9th Cir. 2012)). BLM used the County's General Plan Noise Element as its method. Plaintiffs contend that "normalization increases the reported values by 15dBA to nearly 65dBA in some cases," but the court determined they failed to discuss why BLM's chosen method was insufficient. Although BLM's examination did not include nighttime noise, the court found that BLM considered both the ambient noise during the daytime and the nighttime in its analysis. *Id.*

[312] *Id.* at *28-33 (showing the Plaintiffs relied upon experts to support their position that a setback of 1.25 miles is required for residential properties from a wind project, and many people lived within that range for this project. The court, however, deferred to BLM's determination. The court emphasized that BLM's scientific research setbacks were not needed, the Plaintiffs' experts did not address the particular project, and no mitigation was available).

[313] *Id.* at *33-36 (determining that wind turbines would alter the scenic environment. However, the court noted that BLM conducted a full examination of the project's visual materials, including the "non-turbine facilities, roads, observations tower," and the court concluded that the wind turbines were the most impactful. The court concluded BLM's analysis as "appropriate").

[314] *Id.* at *36-41 (evaluating the Final EIS, which found no Peninsular Bighorn Sheep were located on the land for the project). The Final EIS also recognized the potential direct impacts of the project, including death to the Peninsular Bighorn Sheep, "'elimination of access to foraging areas, disruption of reproduction or lambing activities, prevention of dispersal or intermountain movements.'" (citing to OWEF 1588). *Id.* The FWS performed a Section 7 ESA consultation on the Peninsular Bighorn Sheep as well, resulting in certain mitigation plans to be implemented if Peninsular Bighorn Sheep were found. *Id.* The court recognized that, while the impact of the Peninsular Bighorn Sheep is not known, BLM acted reasonably to develop mitigation plans. *Id.*

[315] *Id.* at *41.

[316] *Id.* at *44-46 (indicating that the U.S. Court of Appeals for the Ninth Circuit found such impacts are not cognizable under NEPA).

[317] *Id.* at *46-49.

[318] *Id.* at *49.

[319] Vermonters for a Clean Env't, Inc. v. Madrid, 73 F. Supp. 3d 417, 435 (D. Vt. 2014) (holding that the Plaintiffs' challenge to U.S. Department of Agriculture Forest Service's issuance for a special use permit for a wind power project was denied since no violations of NEPA nor the Wilderness Act had occurred).

[320] Protect Our Comtys. Found. v. Jewell, 825 F.3d 571, 588 (9th Cir. 2016) (dismissing Plaintiffs' objection to the Bureau of Land Management's approval for a right-of-way for a wind power development project because the court found no violations of NEPA, the Migratory Bird Treaty Act, the Bald and Golden Eagle Protection Act, or the APA).

[321] Or. Nat. Desert Ass'n v. Jewell, 823 F.3d 1258, 1260 (9th Cir. 2016) (finding that the Bureau of Land Management's environmental review for a right-of-way for the wind power development project did not properly examine the effects on the greater sage grouse was affirmed).

## Endnotes: Infrastructure and Development in an Era of Extreme Weather Events: We Need the National Environmental Policy Act!

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[29] Holy Cross, 455 F. Supp. 2d at 536-37.

[30] Blanco, 2006 WL 2366046, at *9-10.

[31] *See* San Luis Obispo Mothers for Peace v. Nuclear Regulatory Comm'n, 449 F.3d 1016, 1028-30 (9th Cir. 2006); N.J. Dep't of Envtl. Prot., v. U.S. Nuclear Regulatory Comm'n, 561 F.3d 132, 143-44 (3d Cir. 2009).

[32] Mothers for Peace, 449 F.3d at 1028-30; New Jersey, 561 F.3d at 143-44.

[33] Trump's Infrastructure Plan, *supra* note 14, at 36-37, 49-50.

[34] *See* Fixing America's Surface Transportation Act (FAST Act), 42 U.S.C. § 4370m et seq. (2015); *see also Permitting Dashboard: About the Federal Infrastructure Permitting Dashboard*, Federal Infrastructure Projects (2017), https://www.permits.performance.gov/about (last updated Aug. 31, 2017).

[35] Little Information, *supra* note 15, at 10-11.

[36] Congressional Research Service, R-42479, The Role of the Environmental Review Process in Federally Funded Highway Projects: Background and Issues for Congress, 1, 36-37 (2012) (citing Thomas, H.R. and Ellis, R.D, *Avoiding Delays During the Construction Phase of Highway Projects,* National Cooperative Highway Research Program Transportation, Transportation Research Bd., (2001) ("More time spent in design identifying problems will reduce construction time and result in a shorter overall project time. A widely recognized principle is that spending more monies during planning and design will reduce the time and cost required for construction by avoiding unforeseen conditions, reducing to a minimum design errors and omissions, and developing schemes that will support the most efficient approach to construction.")

[37] Dep't of Transp., v. Public Citizen, 541 U.S. 752, 767 (2004).

[38] *See* Schaper, *supra* note 4.

[39] *See* 40 C.F.R. §§ 1506.6(b), 1500.2(d), 1500.1; *supra* note 13 and accompanying text.

## Endnotes: The Uber Drive: Self-Driving Cars Could Create More Uncertainty with Gig Economy's "Independent Contractors"

*continued from page 37*

[23] *Beyond Misclassification*, *supra* note 5, at 593 (stating that Uber has lobbied heavily and even given state legislators "model codes" to pass); *see* Michael Hiltzik, *How Uber's big settlement may make things worse for its drivers*, L.A. Times (Apr. 22, 2016), http://www.latimes.com/business/hiltzik/la-fi-hiltzik-uber-settlement-20160422-snap-htmlstory.html (stating that Uber's policy to no longer deactivate riders for low ride acceptance rates was created because of settlement discussions).

[24] *Dependent Contractors*, *supra* note 11, at 648-49; Seth D. Harris & Alan B. Krueger, *A proposal for Modernizing Labor Laws for Twenty-First-Century Work: The "Independent Worker"*, 17-18 (Hamilton Project, Discussion Paper No. 2015-10, 2015), http://www.hamiltonproject.org/assets/files/modernizing_labor_laws_for_twenty_first_century_work_krueger_harris.pdf (furthering that another classification for workers called "independent workers" that would address the issue) [hereinafter *Independent Worker*].

[25] *See Beyond Misclassification*, *supra* note 5, at 597 (explaining that Lyft's firing methods were revised to allow the right to arbitration before booted from the app because of the settlement discussions arising from Cotter v. Lyft, 60 F. Supp. 3d 1067 (N.D. Cal 2015)).

[26] *See id.* at 600 (describing these jobs as "precarious" as the work shifts from "projects" to "task," and requires a lower level of skill to complete them).

[27] *Independent Worker*, *supra* note 24, at 9 (providing an example of the problem with paying a driver when they are "waiting" for a ride with the app open as they do personal tasks). *But see* Ross Eisenbrey & Lawrence Mishel, *Uber business model does not justify a new 'independent worker' category*, Econ. Pol'y Inst. (Mar. 17, 2016), https://www.epi.org/publication/uber-business-model-does-not-justify-a-new-independent-worker-category/ (arguing against the example from Harris and Krueger [*Independent Worker*]).

[28] *See* Stephen Gandel, *Uber-nomics: Here's what it would cost Uber to pay its drivers as employees*, Fortune (Sept. 17, 2015), http://fortune.com/2015/09/17/ubernomics/ (estimating that it would cost Uber $4.1 billion a year to cover employee benefits); *see also* Caroline O'Donovan, *Some Uber Customers Will Pay More So Drivers Can Buy Injury Insurance,* BuzzFeed News (May 9, 2017), https://www.buzzfeed.com/carolineodonovan/uber-customers-will-pay-more-so-drivers-can-buy-insurance?utm_term=.pqPGLj3Vo#.doGVJ9gWZ (stating that Uber raised ride costs by five cents a mile in certain states to cover its pilot personal injury insurance program for drivers).

[29] *See* Press Release, Econ. Pol'y Inst., Uber drivers should be paid for time spent waiting for fares (Mar. 17, 2016), https://www.epi.org/press/uber-drivers-should-be-paid-for-time-spent-waiting-for-fares-facts-of-being-an-uber-driver-reveal-no-need-to-create-a-third-category-of-worker/ (stating that apps that prevent multitasking and ignoring the app when it is on could prevent workers from earing minimum wage without accepting tasks).

[30] *See Star ratings*, Uber, https://www.uber.com/drive/resources/how-ratings-work/ (last visited Apr. 2, 2018) (explaining that a driver gets deactivated if the driver's rating goes below and maintains a certain level).

[31] *See* Hiltzik, *supra* note 23 and accompanying text; *see also Uber Community Guidelines*, Uber, https://www.uber.com/legal/community-guidelines/us-en/ (last visited Apr. 2, 2018) (detailing the current policy about low ride acceptance rates).

[32] *See* Kessler, *supra* note 21.

[33] *See* Greg Bensinger, *Uber's Driver Dilemma: Fare Hikes and Cuts Don't Change Pay*, Wall St. J. (Nov. 12, 2017, 5:45PM), https://www.wsj.com/articles/ubers-driver-dilemma-fare-hikes-and-cuts-dont-change-pay-1510491602 (mentioning that Uber's large investment into self-driving vehicles could allow Uber to avoid having any drivers); Gandel, *supra* note 28 and accompanying text.

[34] *Autonomous Vehicles; Self-Driving Vehicles Enacted Legislation*, Nat'l Conference of State Legislatures, http://www.ncsl.org/research/

transportation/autonomous-vehicles-self-driving-vehicles-enacted-legislation.aspx (last visited Apr. 2, 2018); Aarian Marshall, *Congress Unites (Gasp) to Spread Self-Driving Cars Across America*, WIRED (Sept. 6, 2017, 4:33 PM), https://www.wired.com/story/congress-self-driving-car-law-bill/; *see* Stan Horaczek, *The role of humans in self-driving cars is even more complicated after Uber's fatal crash*, POPULAR SCI. (Mar. 23, 2018), https://www.popsci.com/human-drivers-and-self-driving-cars (stating that most self-driving cars still need drivers to be present and aware to be able to take over driving).

[35] Jack Barkenbus, *People Aren't Ready for Self-Driving Cars*, CITYLAB (Jan. 4, 2018), https://www.citylab.com/transportation/2018/01/autonomous-vehicles-consumer-backlash/549650/; Kirsten Korosec, *A Majority of U.S. Drivers Still Don't Trust Self-Driving Cars*, FORTUNE (Jan. 24, 2018), http://fortune.com/2018/01/24/aaa-drivers-fear-self-driving-cars/ (stating that a majority of U.S. drivers are wary about riding in a fully self-driving car).

[36] INSTACART, https://instacart.com/ (last visited Apr. 2, 2018) (grocery delivery service); POSTMATES, https://about.postmates.com/ (last visited Apr. 2, 2018) (delivery service); *Cf.* Davey Alba, *Instacart Shoppers Can Now Choose To Be Real Employees*, WIRED (Jun. 6, 2015, 5:46 PM), https://www.wired.com/2015/06/instacart-shoppers-can-now-choose-real-employees/ (reporting that Instacart began allowing employees in select cities choose to be employees).

[37] Enrique Dans, *The evolution of the taxi: Didi Chuxing puts its pedal to the metal*, MEDIUM (Apr. 29, 2017), https://medium.com/enrique-dans/the-evolution-of-the-taxi-didi-chuxing-puts-its-pedal-to-the-metal-f57901408304 (stating that self-driving vehicles are developing fast, and that Waymo's self-driving taxis that already operating in Arizona).

[38] *How Employers Can Benefit From the Gig Econmy: 31 Business Owners, Founder & Experts Reveal the Biggest Ways the Gig Economy Benefits Employers*, WONOLO, https://www.wonolo.com/blog/how-employers-benefit-from-the-gig-economy/ (last updated Jan 13, 2018); Samantha Raphelson, *As the Gig Econmy Grows, Advocates Raise Concerns About Workers' Safety*, NPR (Dec. 4, 2017), https://www.npr.org/2017/12/04/568377471/as-the-gig-economy-grows-advocates-raise-concerns-about-workers-safety (discussing liabilities that companies avoid with independent contractors); Kessler, *supra* note 21 (stating that a company was able to operate with up to thirty percent less in labor costs with independent contractors).

[39] *See* Maya Kosoff, *Why the "sharing economy" keeps getting sued*, HIVE (Nov. 9, 2017, 11:52 AM), https://www.vanityfair.com/news/2017/11/postmates-worker-classification-lawsuit (discussing cases against non-ride-hailing gig economy companies like Postmates and Grubhub).

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